ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION – PHASE 2 5808 ROCK CUT ROAD, JAMESVILLE, NY 13078 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

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INVITATION TO BID ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION – PHASE 2 5808 ROCK CUT ROAD, JAMESVILLE, NY 13078 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

Sealed Bids for construction of modifications to the Rock Cut Road Transfer Station Facility for the Onondaga County Resource Recovery Agency (OCRRA) (Owner) will be received by OCRRA in the Agency's office at 100 Elwood Davis Road, North Syracuse, NY 13212-4312 until 2:00 p.m. local time on September 14, 2022 and at that place and time will be publicly opened and read aloud.

Separate sealed Bids will be received for the following:

Contract No. 1 - General Transfer Station Building 2 Optimization - Phase 2

Contract No. 2 - Plumbing & Fire Suppression Building 2 Optimization – Phase 2

Contract No. 3 - Electrical Building 2 Optimization - Phase 2

The work is part of the Rock Cut Road Transfer Station Optimization Project and consists of loadout modifications; structural protection; fire protection system modifications; electrical modifications; and water supply modifications in accordance with the Bidding Documents prepared by Cornerstone Engineering and Land Surveying, PLLC (Cornerstone).

All Bids must be received via mail or hand delivered in sealed envelopes to OCRRA, 100 Elwood Davis Road, North Syracuse, NY 13212-4312, Attn: Cristina Albunio, P.E., Agency Engineer. Bids shall be labeled: "ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION PHASE 2 Contract No. ."

Electronic copies of Bidding Documents may be requested from Owner. Direct all technical questions and inquires regarding distribution of Bidding Documents to Owner's Procurement Contact Person, Mr. John Connery, who will process all questions by email at jconnery@ocrra.org. The subject heading for all e-mails shall be:

OCRRA Rock Cut Road Transfer Station	Building 2 Optimization Pha	se 2
Contract No.		

Questions will be received until 2:00 p.m. on August 31, 2022. No response will be given to questions received after that date. OCRRA will provide a full written response/an addendum to all potential bidders by close of business September 7, 2022.

Bidders shall review and acknowledge all Addenda on the Bid Form.

A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a Bid Bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of the Contract's General Conditions.

If, upon acceptance of a Bid, a Bidder fails to enter into a Contract with Owner, the bid security shall be forfeited to and become the property of OCRRA.

No Bidder may withdraw its Bid within 60 days after the date of the Bid opening. The successful Bidder must furnish a 100% Performance Bond and a 100% Payment Bond with a surety company satisfactory to

Owner and conforming to the prerequisite requirements of the General Conditions on the forms included in the Bidding Documents.

The Owner reserves the right to waive any informalities or to reject any or all Bids.

The Owner is exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties on all materials, equipment, and supplies sold to the Owner pursuant to this Contract. These taxes are not to be included in the Bid.

The Owner is an equal opportunity organization. All qualified Minority and Women-Owned Business Enterprises (MBE/WBE) suppliers, contractors, and/or businesses will be afforded equal opportunity without discrimination because of race, color, religion, national origin, sex, sexual preference, age, or disability.

Bidders are to familiarize themselves with the State Finance Law Procurement Compliance Provisions and fill out the "Disclosure to OCRRA During Procurement Process and Prior Non-Responsibility Determinations" form, both of which are attached to the Bid Form.

Bidders are required to certify, under penalty of perjury, that Bids have been prepared without collusion with other Bidders, subcontractors, suppliers, etc. This certification is included with the Bid Form and each Bidder must sign in the space provided.

A non-mandatory pre-bid conference will be held at 3:30p.m. 24th day of August 2022 at the site. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference.

Cristina Albunio, PE Agency Engineer, OCRRA

Dated: August 3, 2022

SECTION 00100

INSTRUCTIONS TO BIDDERS

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, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Electronic Documents

- A. When the Bidding Requirements indicate that electronic copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
 - 1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner, Construction Manager and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner, Construction Manager and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents. However, Bidder assumes all risks associated with differences arising from transmission/receipt of electronic versions

of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 Bidder must submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:
 - A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
 - E. Other required information regarding qualifications.
- 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 Contractor shall perform a minimum of 50% of the Work, excluding material and equipment purchases, with its own labor force. Contractor shall abide by the minimum hourly wage rates attached to the Supplementary Conditions.
- 3.05 The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract, and to complete the work contemplated therein. Conditional bids will not be accepted.
- 3.06 Before awarding this Contract, a meeting may be conducted with the lowest Bidder(s) to discuss the Contractor's plan for constructing the proposed project (i.e., equipment that will be used, field representative, overall understanding of the project, etc.). The purpose of this meeting is to further allow the Owner and Engineer to select the appropriate Contractor for this project.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner, Construction Manager and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.

4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 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.

5.02 Existing Site Conditions

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
 - 1. The Supplementary Conditions identify existing conditions at or adjacent to the Site.
 - Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

5.03 Other Site-related Documents

- A. Owner will make copies of these other Site-related documents available to any Bidder on request.
- B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
- C. The other Site-related documents are not part of the Contract Documents.
- D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.

5.04 Site Visit and Testing by Bidders

- A. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general 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. Bidder is responsible for establishing access needed to reach specific selected test sites.
- B. Bidder must 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.
- C. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 Other Work at the Site

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

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

- 6.01 Express Representations and Certifications in Bid Form, Agreement
 - A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
 - B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Construction Manager in writing. Contact information and submittal procedures for such questions are defined on the Invitation to Bid.

EJCDC® CMA-200, Instructions to Bidders for Construction Contract—Construction Manager as Advisor Series.

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- 7.03 Interpretations or clarifications considered necessary by Construction Manager or Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received after the deadline defined in the Bidding Documents may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract 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 Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 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, 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 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, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will 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 7 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 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 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 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Construction Manager authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Construction Manager until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will 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.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for portions of the Work within five days after Bid opening.
- 11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner, Construction Manager, or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, then Construction Manager may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, without an increase in Bid price
- 11.04 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 and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner, Construction Manager, or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner, Construction Manager, and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
 - A. All blanks on the Bid Form must be completed, and the Bid Form must be duly signed. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price

- must 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."
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall submit its Bid on a paper copy of the Bid Form printed from the Electronic Document version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible.
- 12.03 A Bid by a corporation must 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 must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 Lump Sum

A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

13.02 Base Bid with Alternates

- A. Bidders must 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.

13.03 Unit Price

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.04 Allowances

A. For cash allowances the Bid price must 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 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include 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 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must 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 must 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 must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

14.03 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 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened 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.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 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, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

16.01 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 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 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 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

- 18.03 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, whether in the Bid itself or in a separate communication to Owner or Construction Manager, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 Evaluation of Bids

- A. In evaluating Bids, Owner will consider whether 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.
- 18.06 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.
- 18.07 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 19—BONDS AND INSURANCE

- 19.01 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, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will 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 must 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 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed or electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21 - SALES AND USE TAXES

21.01. Owner is exempt under Section 2045 of the Public Authorities Law from New York State sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall

not be included in the Bid. Refer to Paragraph 6.10 of the Supplementary Conditions for additional information.

ARTICLE 22 - NEW YORK STATE BIDDING PROVISIONS

- 22.1 Hours and Wages (See Labor Law Section 220)
 - A. No laborer, workman or mechanic in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or part of the work contemplated by this Contract shall be permitted or required to work more than eight hours in any one calendar day or more than five days in any one week except in cases of extraordinary emergency, including fire, flood or danger to life or property.
 - B. Each laborer, workman or mechanic employed by the Contractor, Subcontractor or other person about or upon the work under this contract shall be paid no less than the prevailing rate wages and shall be provided the supplements not less than the prevailing supplements as determined by the Fiscal Officer pursuant to Article 8 of the Labor Law. The prevailing rate schedule as determined by the Fiscal Officer follows this section and is a part of this Contract. Wage rates redetermined in accordance with the law will be transmitted, when received, to the Contractor and will become a part of this Contract at no cost to the Owner. Any person employed on the site of the work in an occupation not listed in the following prevailing rate schedule shall be paid not less than the minimum rate per hour and shall be provided not less than the supplements designated by the Fiscal Officer.
 - C. The Contractor is encouraged to review Labor Law, Section 220 and related Sections in their entirety.
- 22.2 Discrimination Prohibited (see Labor Law Section 220-e)
 - A. The Contractor agrees, in accordance with the applicable provisions of the Labor Law of the State of New York:
 - (1) That in the hiring of employees for the performance of work under this Contract or any subcontract hereunder, no Contractor, Subcontractor nor any person acting on behalf of such Contractor or Subcontractor, shall by reason of race, creed, color, national origin, or sex discriminate against any citizen of the State of New York who isqualified and available to perform the work to which the employment relates;
 - (2) That no Contractor, Subcontractor, nor any person on his behalf shall, in any

- manner, discriminate against or intimidate any employee hired for the performance of work under this Contract on account of race, creed, color, national origin, orsex;
- (3) That there may be deducted from the amount payable to the Contractor by the Owner under this Contract a penalty of five dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the Contract;
- (4) That this Contract may be canceled or terminated by the Owner and all monies due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this section of the Contract;
- (5) The aforesaid provisions of this section covering every contract for or on behalf of the State or a municipality for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.
- 22.3 Dust Hazards (See Labor Law Section 222-a)
 - A. If, in the construction of the work covered by the Contract, a harmful dust hazard is created for which appliances or methods for the elimination of dust have been approved by the Board of Standards and Appeals, such appliances or methods shall be installed and maintained and effectively operated by the Contractor at his expense.
 - B. The Contract shall be void and of no effect unless the Contractor complies with the provisions of this subdivision of the Contract and Labor Law Section 222-a.
- 22.4 Non-Collusion Certification (see General Municipal Law Section 103-d or where applicable Public Authorities Law Section 2878)
 - A. Each bidder shall complete the Non-Collusive Bidding Certification attached to the Bid Form.
- 22.3 Worker's Compensation (see General Municipal Law Section 108)
 - A. This Contract shall be void and of no effect unless the person or corporation making or performing such contract shall secure compensation for the benefit of, and keep insured during the life of such contract, such employees, in compliance with the provisions of the worker's compensation law.

22.4 Lien Law

A. The attention of the Contractor is invited to the provisions of the Lien Law of the State of New York, wherein funds received by a contractor for a public improvement are declared to constitute trust funds in the hands of such contractor to be applied first to the payment of certain claims.

22.5 Sales and Use Tax Exemptions

A. Owner is exempt under Section 2045 of the Public Authorities Law from New York State sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph 6.10 of the Supplementary Conditions for additional information.

Accordingly, the following transactions, if occurring under this Contract, are exempt from the sales and compensating use taxes of the State of New York and of cities and counties thereof, and no sales and compensating use taxes relative to these exempt transactions shall be included in Bids:

- (1) the sale of materials, equipment and supplies to the owner;
- (2) the sale to the Contractor or his Subcontractors of materials, equipment, and supplies for use in erecting any structure or building included in the Project or in adding to, altering or improving any real property included in the Project, provided that such materials, equipment, and supplies are to become an integral component part of such structure, building or real property (i.e., incorporated in the Project);
- (3) the sale to the Contractor or his Subcontractors of materials, equipment and supplies to be resold to the Owner other than those described in (3) above.
- B. This Project is to be bid, the Contract drawn and payments made in such manner that the Owner shall have the full advantage of all available exemptions from sales and compensating taxes.
- C. The Contractor, his Subcontractor and his materialmen shall complete New York Sales Tax Form ST120.1 (Contractor Exempt Purchase Certificate) and shall furnish such certificate to all persons, firms or corporations from whom they purchase materials, equipment and supplies which may be tax exempt as provided above.
- D. The Contractor and his Subcontractor shall maintain and keep for a period of six years after the date of final payment for the sale, or, if a claim for sales or compensating use tax is pending or threatened at the end of such six year period, until such claim is finally determined and settled, records which in the judgement of the New York State

- Department of Taxation and Finance adequately show all such tax exempt materials, equipment and supplies purchased by each.
- E. Each Bidder shall include in his Bid and shall be responsible for the payment of all costs and liabilities (other than those directed to be excluded as in this section above provided) for the amounts assessed under any applicable sales, consumer, use or similar tax, any assessment or tax upon the wages and salaries paid employees of the Contractor and the Subcontractor under the Contract and any other applicable taxes however assessed.

ARTICLE 23 - OCRRA PROVISIONS

23.1 Communications

- A. Communications with the Owner shall be solely through the OCRRA Procurement Contact Person as indicated below. Bidders are specifically directed not to contact any other OCRRA officials or employees in any fashion regarding this bid without prior approval. Unauthorized communications may result in the rejection of the bid.
- B. Owner's Procurement Contact Person, Mr. Jack Connery, will process all questions by email at jconnery@ocrra.org.
- 23.2 State Finance Law Procurement Compliance Provisions
 - C. Bidders are to familiarize themselves with the summary of the State Finance Law Procurement Compliance Provisions and are required to fill out the "Disclosure to OCRRA During Procurement Process of Prior Non-Responsibility Determinations" form, both of which are attached to the Bid Form. Failure to do so will result in disqualification of the Bid.

END OF SECTION

BID FORM

CONTRACTOR'S BID FOR CONSTRUCTION OF CONTRACT NO. ____ ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION – PHASE 2 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY 5808 ROCK CUT ROAD, JAMESVILLE, NY 13078

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 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

Onondaga County Resource Recovery Agency 100 Elwood Davis Road North Syracuse, NY 13212-4312 Attn: Cristina Albunio, P.E., Agency Engineer

Bids must be received via mail or hand delivered in sealed envelopes to OCRRA at the above address, and be clearly labeled "CONSTRUCTION OF CONTRACT NO. _____ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION – PHASE 2"

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—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security in the form of a Bid Bond;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
 - E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - F. Required Bidder Qualification Statement with supporting data; and
 - G. Certificate of Non-Collusion
 - H. Resolution Accompanying Bid
 - I. Conflict of Interest Affidavit
 - J. Important State Finance Law Procurement Compliance Provisions

K. Disclosure to OCRRA During Procurement Process of Prior Non-Responsibility Determinations

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

CONTRACT NO. 1 – General Transfer Station Building 2 Optimization – Phase 2

- 3.01 Lump Sum Bids
 - A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:
 - 1. Lump Sum Price (Single Lump Sum)

Lump Sum Bid Price \$

B. All specified allowance(s) are included in the price(s) set forth below and have been computed in accordance with Paragraph 13.02 of the General Conditions.

Ī	Total for Allowances	\$25,000

3.02 Unit Price Bids

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1-1	Demolition and Removal of Building 2 Loadout Reinforced Concrete Knee Wall and Protective Steel Plate with Cap	EA	1		\$
1-2	Removal of Building 2 Loadout Steel Components (Spill Shield and Supporting Structure)	EA	1		\$
1-3	Demolition and Removal of Building 2 Basement Overhead Door and Appurtenances	EA	1		\$
1-4	Floor Penetration (for Non- Potable Water Piping) From Sprinkler Room	EA	1		\$
1-5	Fabricate, Supply and Install Basement Overhead Door and Framing	EA	1		\$
1-6	Fabricate, Supply and Install Column Protection Plates	EA	1		\$
1-7	Supply and Place OSHA Compliant Non-Penetrating Guard Rail System and Safety Signage	EA	1		\$
Total of	All Unit Price Bid Items				\$

B. Bidder acknowledges that:

- 1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
- 2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.
- 3.03 Total Bid Price (Lump Sum, Allowances and Unit Prices)

Total Bid Price	\$

CONTRACT NO. 2 - Plumbing & Fire Suppression Building 2 Optimization - Phase 2

3.01 Lump Sum Bids

- A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:
 - 1. Lump Sum Price (Single Lump Sum)

Lump Sum Bid Price	\$
	, ·

BID FORM

B. All specified allowance(s) are included in the price(s) set forth below and have been computed in accordance with Paragraph 13.02 of the General Conditions.

	Total for Allowances	\$5,000	
3.02	Total Bid Price (Lump Sum, Allowances and Unit Prices)		
	Total Bid Price	\$	

CONTRACT NO. 3 – Electrical Building 2 Optimization

- 3.03 Lump Sum Bids
 - A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:
 - 1. Lump Sum Price (Single Lump Sum)

B. All specified allowance(s) are included in the price(s) set forth below and have been computed in accordance with Paragraph 13.02 of the General Conditions.

Total for Allowances	\$2,500

3.04 Total Bid Price (Lump Sum and Allowances)

Total Bid Price	\$
-----------------	----

ARTICLE 4—TIME OF COMPLETION

- 4.01 Bidder agrees that the Work will be substantially complete within 105 days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 120 days after the date when the Contract Times commence to run. On-site access for construction activities must not begin earlier than January 1.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS—ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

- 5.01 Bid Acceptance Period
 - A. 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.
- 5.02 Instructions to Bidders
 - A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

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5.03 Receipt of Addenda

A. Bidder hereby acknowledges receipt of the following Addenda

Addendum Number	Addendum Date

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 Bidder's Representations

A. In submitting this Bid, Bidder represents the following:

Bidder has examined and carefully studied the Bidding Documents, including Addenda.

- 1. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- 2. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
- 3. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
- 4. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
- 5. 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 the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
- 6. Based on the information and observations referred to in the preceding paragraph, Bidder 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.
- 7. 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.

- 8. Bidder has given Construction Manager written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Construction Manager is acceptable to Contractor.
- 9. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- 10. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 Bidder's Certifications

A. The Bidder certifies the following:

- 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.
- 2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
- 3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
- 4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. 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.
 - b. 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.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
- 5. Bidder will perform the Work in accordance with the Contract Documents for the prices shown in the Bid Schedules that follow.
- 6. Bidder acknowledges that Bidder's price(s) constitute Bidder's sole compensation for performing all portions of the Work assigned to the specific Contractor required by the Contract Documents, and if a particular part of the Work is not listed specifically in the Bid Item Descriptions, Bidder has included that part of the Work in the Bid Item Description which it most logically belongs.

BID FORM

BIDDER hereby submits this Bid as set forth above:

Bidder:	
- Dva	(typed or printed name of organization)
Ву:	(individual's signature)
Name:	(typed or printed)
Title:	
Date:	(typed or printed)
	(typed or printed)
If Bidder is	a corporation, a partnership, or a joint venture, attach evidence of authority to sign.
Attest:	(individual's signature)
Name:	(individual s signature)
Title	(typed or printed)
Title:	(typed or printed)
Date:	(typed or printed)
Address fo	or giving notices:
Bidder's C	ontact:
Name:	(burned our printed)
Title:	(typed or printed)
	(typed or printed)
Phone: Email:	
Address:	
naaress.	
Bidder's C	ontractor License No.: (if applicable)
	· ·· · · ·
SUBMITTE	O on, 20

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BID BOND (PENAL SUM FORM)

Bidder	Surety	
Name:	Name:	
Address (principal place of business):	Address (principal place of business):	
Owner	Bid	
	Project (name and location): Rock Cut Road Transfer	
Onondaga County Resource Recovery	Station Building 2 Optimization Phase 2 – Contract	
Name: Agency (OCRRA)	No	
Address (what and along of hostings)	OCRRA – Rock Cut Road Transfer Station	
Address (principal place of business): 100 Elwood Davis Road	5808 Rock Cut Road, Jamesville NY 13078	
Syracuse NY 13212		
•		
	Bid Due Date: September 14, 2022	
Bond		
Penal Sum:		
Date of Bond:		
Surety and Bidder, intending to be legally bound he do each cause this Bid Bond to be duly executed by	ereby, subject to the terms set forth in this Bid Bond,	
Bidder	Surety	
(Full formal name of Bidder)	(Full formal name of Surety) (corporate seal)	
By:	By:	
(Signature)	(Signature) (Attach Power of Attorney)	
Name: (Printed or typed)	Name:(Printed or typed)	
Title:	Title:	
Attest:(Signature)	Attest:(Signature)	
Name:	Name:	
(Printed or typed)	(Printed or typed)	
Title:	Title:	
Notes: (1) Note: Addresses are to be used for giving any requi	red notice. (2) Provide execution by any additional parties, such as	

- 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 will be Owner's sole and exclusive remedy upon default of Bidder.
- 2. Default of Bidder occurs 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 will 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 does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
- 6. No suit or action will 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 will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
- 8. Notices required hereunder must 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 Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will 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 will 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 governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
- 11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

BID SECURITY

(ATTACH BID SECURITY TO THIS PAGE IF CERTIFIED CHECK.)

STATEMENT OF SURETY'S INTENT

(To be completed if Bid Security is to be Certified or Bank Cashier's Check)

To:	
	(Owner)
We have reviewed the Bid of	
	(Contractor)
of	
for	(Address)
	(Project)
Bids for which will be received on	
Elde for William Will be received on	(Bid Opening Date)
is our present intention to become sure by the Contract. Any arrangement for the bonds ourselves and we assume no liability requisite bonds.	of the Contractor be accepted and the Contract awarded to him, it it you have the performance bond and labor and material bond required required by the Contract is a matter between the Contractor and to you or third parties if for any reason we do not execute the
We are duly authorized to do bus	iness in the State of
Attest:	
	Surety's Authorized Signature(s)
Attach Power of Attorney	
(Corporate seal if any. If no seal, write	"No Seal" across this place and sign.)
(This form must be	completed prior to the submission of the bid.)

BIDDER'S QUALIFICATION STATEMENT

To induce the making of this Contract, the Bidder represents to the Owner the following, as evidence of Bidder's Qualifications to perform the work herein specified:

1.	How many years has your organization been in business under the name in which you propose
	to execute this Contract?
	Years

2. What projects of character similar to that proposed has your present organization completed? Give the information indicated by the following tabulations:

DESCRIPTION OF WORK	APPROXIMATE AMOUNT OF CONTRACT	APPROXIMATE DATE WORK WAS DONE
		DESCRIPTION AMOUNT OF

3.	Has your present organization ever failed to complete any work awarded to it? If so, si	tate
	when, where and why.	

- 4. Do you have, or can you procure the necessary personnel, equipment, facilities and financial resources to immediately undertake and satisfactorily complete the work contemplated in this Contract?
- 5. Define the percentage of the total contract that will be performed by a Minority or Women Owned Business. If any portion of this work will be performed by a subcontractor, please list the subcontractor with their percentage of the total contract.

LIST OF PROPOSED SUBCONTRACTORS

This document is an Attachment to the Bid Form and is a legally binding part thereof.

Each Bidder shall complete this "List of Proposed Subcontractors" in its entirety. Failure to do so shall render the Bid Form non-responsive and be grounds for its rejection by Owner. If Bidder intends to self-perform the type of work indicates, write "Self Perform" under Subcontractor Name.

Type of Work	Subcontractor Name and Address	Certified Disadvantage Business Enterprise?	Subcontract Amount	State Contractor License Number

OCRRA reserves the right to	review Subcontractor	qualifications prior to,	and at the consideration for
award of the contract			

Fotal Subcontracted Amount: \$_	
·	_
Percent of Total Contract:	%

CONTRACTOR'S LICENSE NO.

<u>OR</u>

EVIDENCE OF BIDDER'S ABILITY TO OBTAIN STATE CONTRACTOR'S LICENSE

CERTIFICATE OF NON-COLLUSION

Non-collusive Certifications required of all bidders/proposers/quoters under Section 103-d of the General Municipal Law as amended by Chapter 751 of the Laws of 1965 and Chapter 675 of the Laws of 1966 effective September 1, 1966, is as follows:

By submission of this bid/proposal/quote, the bidder/proposer/quoter and each person signing on behalf of the bidder/proposer/quoter certifies, and in the case of a joint bid/proposal/quote each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

- (1) The prices in this bid/proposal/quote have been arrived at independently without collusion, consultation, communications, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other bidder/proposer/quoter or with any competitor.
- (2) Unless otherwise required by law, the prices which have been quoted in this bid/proposal/quote have not been knowingly disclosed by the bidder/proposer/quoter and will not knowingly be disclosed by the bidder/proposer/quoter prior to opening, directly or indirectly, to any other bidder/proposer/quoter or to any competitor; and
- (3) No attempt has been made or will be made by the bidder/proposer/quoter to induce any other person, partnership, or corporation to submit or not to submit a bid/proposal/quote for the purpose of restricting competition.

			Legal Name of	f Bidder/Proposer/Quoter	(Typed)
			Address		(Typed)
			City	State	Zip
		BY:			
		ы.	Signature		
			Name		(Typed)
Dated	, 20				
			Title		(Typed)

RESOLUTION ACCOMPANYING BID (To be filled out by corporate Bidders only)

To: Onondaga County Resource Recovery (Name of	y Agency of Owner)
of the Board of Directors of the State of New York, duly called and held on then being present; that the said resolutions	e and correct copy of resolutions duly adopted at a meeting, a corporation incorporated under the Laws of theday of, 2022 , a quorum have been entered upon the regular minute book of the rtificate of incorporation and the by-laws and are now in full
RESOLVED THAT	omit the Bid Proposal of this corporation for the following
deed of such corporation, and for all inaccura shall be liable under the penalty of perjury; and	ficate as to non- collusion required by law as the act and acies or misstatements in such certificate this corporation to enter into the contract if awarded to this corporation; orporation is/are authorized on behalf of this corporation to
(Authorized Officer[s])	
I FURTHER CERTIFY that the names of the peare as follows:	ersons holding titles referred to in the foregoing resolutions
Name	Title
<u>_</u>	
	Secretary:
	Dated:
(Corporate seal if any)	

CONFLICT OF INTEREST AFFIDAVIT

ST	ATE OF)
CC) ss: DUNTY OF)
	, being duly sworn, deposes and says for and on behalf of
	that:
1.	Our (my) firm,, is an independent firm or company, and has this date submitted a bid, proposal, or quote to provide goods and/or services to the Onondaga County Resource Recovery Agency.
2.	I certify on behalf of the bidder, proposer, or quoter that it and its employees have no interest, direct or indirect, which could conflict in any manner or degree with the performance or provision of these goods arid/or services to the Onondaga County Resource Recovery Agency.
3.	If awarded a contract my (our) firm agrees that in providing the goods or in the rendering of services to the Onondaga County Resource Recovery Agency, no persons having any such interest shall be employed by the firm. I assume full responsibility for knowing whether my (our) employees or agents have any such interest and hereby certify that no such interest exists.
Da	ated:, 20 By:
	For and on Behalf of:
Sv	vorn before me this day of, 20
	Notary Public

Important State Finance Law Procurement Compliance Provisions

OCRRA Procurement regarding: <u>ROCK CUT ROAD TRANSFER STATION BUILDING 2</u> <u>OPTIMIZATION – PHASE 2</u>

OCRRA Designated Procurement Contact Person(s): Mr. Jack Connery

OCRRA conducts its procurements to provide all vendors with an opportunity to compete fairly to maximize competition. New York State has enacted provisions in its State Finance Law, applicable to any contract over \$15,000.00, that further promotes fair competition. This law now requires that all communications i.e. "contacts" with the Agency regarding this procurement, after the Request to Bid, Request for Proposals, or Request for Quotes go out, must be through a designated OCRRA Procurement Contact Person. Our Designated Procurement Contact Person is listed above. All contacts by potential vendors should be through the Designated Procurement Contact Person and NO ONE ELSE! All such contacts will be recorded by the Designated Procurement Contact Person and any responding information given to a potential vendor will also be shared with all potential vendors, so no one has a competitive advantage. As a potential vendor on this procurement, you will need to fill in the Permissible Contacts Affirmation form, attached, and submit it with your bid/proposal/quote. You will also need to fill in the other part of this two page form that advises OCRRA of any Non-Responsibility Determinations under this law. If you fail to comply with the above Procurement contacts restrictions or you submit knowingly false, inaccurate or incomplete information, or you violate our OCRRA Ethics Code, you may be found to be a "Non-Responsible" vendor. This can result in a rejection of your firm for contract award, or a cancellation of the contract if later discovered (the Contract will include a cancellation provision for such a contingency), and in the event of two such findings in a four year period, debarment from obtaining any further OCRRA procurement contracts for a period of four years from the time of the second violation.

Please be sure to familiarize yourself with these new legal provisions, fill out the attached forms, and contact only the Designated Procurement Contact Person during the procurement process. This will promote fair competition on this procurement and will not disqualify your firm from a potential OCRRA contract award.

Disclosure to OCRRA During Procurement Process of Prior Non-Responsibility Determinations

OCRRA Procurement regarding: ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION – PHASE 2

OCRRA Designated Procurement Contact Person: Mr. Jack Connery

OCRRA conducts its procurements to maximize competition and provide all vendors with an opportunity to compete fairly. New York law now provides that, for any procurement over \$15,000.00, all potential vendors must disclose whether a governmental entity in New York has made a finding of "Non-Responsibility:" "Non-Responsibility" is defined in State Finance Law Section 139-j and can include failure of a potential bidder/proposer/quoter to timely disclose truthful, accurate, or complete information that may allow OCRRA to make a determination as to its "responsibility" relative to this procurement as well as unauthorized procurement contacts (including contacts to someone other than the designated procurement contact) and ethics code violations. In order to qualify for consideration on this procurement, the bidder/proposer/quoter must complete and sign the form below.

Name and Address of Bidder/Proposer/Quoter Seeking to Enter into the Procurement Contract with OCRRA:					
Name, Title, and	Name, Title, and Phone Number of Person Submitting this Form:				
		in New York made a finding of Non-Responsibility regarding er into the Procurement Contract in the previous four years?			
	No	Yes			
Responsibility be	low.	n, please provide details regarding the finding of Non-			
Date of Finding of Non-Responsibility:					
Basis of Finding	Basis of Finding of Non-Responsibility:				
Procurement Con		or other governmental agency terminated or withheld a med bidders/proposers/quoters after a finding of intentional tion? (Please circle):			
	No	Yes			

If yes, please provide details below.	
New York Governmental Entity:	
Date of Termination or Withholding of Contract:	
Basis of Termination or Withholding:	
	_
Bidder/proposer/quoter certifies that all information Finance Law §139-k is complete, true, and accurate	
By:	Date:
Signature	
PERMISSIBLE CON	ITACTS AFFIRMATION
OCRRA regarding that procurement must be throug and no one else. On behalf of my client as a pot understands and agrees to comply with the procedure	issues, New York law requires that all contacts with h the designated OCRRA Procurement Contact Person tential bidder/proposer/quoter, I affirm that my client es of the Onondaga County Resource Recovery Agency York State Finance Law §139-j (3) and §139-j (6) (b).
OCRRA Designated Procurement Contact Person: <u>M</u>	<u> 1r. Jack Connery</u>
Vendor Signature	Print Signer's Name
Vendor Title:	Date:
Vendor Name:	
Vendor Address:	

OCRRA CONSTRUCTION CONTRACT

This A	GREEMI	ENT made as of theday of20
Betwee	en:	Onondaga County Resource Recovery Agency 100 Elwood Davis Road North Syracuse, NY 13212
and		hereinafter called "CONTRACTOR"
parties		ideration of the promises and mutual covenants and agreements herein contained, the agree as follows:
1.	SUPER	SEDING EFFECT
	constitu	ontract supersedes all prior written or oral agreements, if any, between the parties and ites the entire agreement between the parties with respect to the work to be performed his Contract.
2.	SCOPE	E OF WORK
	associa 5808 R of Wor materia transpo of the	contractor shall furnish all the services and materials necessary to perform the work ated with the OCRRA Rock Cut Road Transfer Station Building 2 Optimization Phase 2, a cock Cut Road Jamesville, NY, as set forth in Exhibit A attached hereto entitled "Statemenk" (hereinafter "SOW" or the "Work"). The Contractor agrees to provide and pay for all laborals, equipment, tools, construction equipment and machinery, water, heat, utilities or tation and other facilities and services necessary for the proper execution and completion Work, whether temporary or permanent, and whether or not incorporated or to be prated in the Work.
3.	PERIO	D OF PERFORMANCE
	A.	The Work to be accomplished under this Contract shall be performed as follows: Worl should not begin at the project site before receiving "Notice to Proceed" and shall be substantially complete 105 calendar days from said date of "Notice to Proceed," and sha be fully completed 120 calendar days from the date of "Notice to Proceed." On-site access for construction activities must not begin earlier than January 1.
	В.	Specific periods of performance and completion dates, if applicable, for Contract line items are set forth in the SOW.
4.	CONSI	DERATION AND PAYMENT
	A . :	Subject to the limitations and other conditions contained in this Contract, the price of the Work to be performed under this Contract ("Contract Sum") shall not exceed Dollars (\$).
	В.	Payment shall be in accordance with the following schedule:
		Monthly progress payments in accordance with the Contract Documents.

The hourly rates to be charged by Contractor to OCRRA for services hereunder, if applicable, are set forth in the SOW.

C.

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D. Scheduled payments will be paid by OCRRA net 30 days after receipt of an invoice by OCRRA for a portion or all of the **Work** completed by Contractor, inspected and accepted by OCRRA in writing. OCRRA will have the right to reduce and set-off against amounts payable by OCRRA hereunder for any indebtedness or amounts previously owed by Contractor to OCRRA, however and whenever arising.

5. **LIQUIDATED DAMAGES**

Contractor agrees that if it fails to complete the SOW within the time articulated in 3. Period of Performance, Contractor will pay OCRRA daily stipulated liquidated damages in the amount of One Thousand Five Hundred Dollars (\$1,500.00) per diem.

6. NOTICES AND CORRESPONDENCE

All notices and correspondence shall be sent by either party, in all matters dealing with this Contract, to the following addresses:

A.	To OCRRA:	Onondaga County Resource Recovery Agency Attention: Executive Director 100 Elwood Davis Road North Syracuse, NY 13212
В.	To Contractor:	

7. PERFORMANCE BOND

Contractor will provide to OCRRA, within five (5) days of execution of this Contract, a performance bond in the amount of the Contract. The performance bond provided must be with an A Rated Insurance Company as determined by the New York State Insurance Department.

8. CONTRACT ADMINISTRATION

The names of the individuals specifically authorized to make changes or re-direct the **Work** required by this Contract when permitted pursuant to the provisions hereunder are:

For OCRRA:	Executive Director	For Contractor:	

9. PROJECT COORDINATOR

Contractor shall employ a competent Project Coordinator who shall be in attendance at the Project Site during the progress of the **Work**. The Project Coordinator shall represent the Contractor and all communications given to the Project Coordinator will be as binding as if given to the Contractor.

10. PROGRESS REPORTS

Contractor shall, within five (5) days after date of commencement of the **Work**, prepare and submit to OCRRA for approval a practicable schedule, showing the order in which the Contractor proposes to carry on the **Work**, the date on which it will start, the most important features, including procurement of materials, plant and equipment, and the contemplated dates for completing the same.

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11. RISK OF LOSS

The Contractor assumes the risk of, and shall be responsible for, any loss or damage to equipment or materials furnished under this Contract until delivered to OCRRA, installed (if required) and accepted in writing by OCRRA. The Contractor shall maintain adequate insurance to cover this risk.

12. REQUIRED INSURANCE

Before commencing the **Work** to be performed under this Contract, Contractor shall procure and maintain insurance of the kinds and limits enumerated hereunder. The proposed insurance carrier must have an A.M. Best rating of A or better and be admitted to do business in New York State. Certificates of such insurance issued by the Contractor's insurance carrier shall be filed with OCRRA before commencement of Project **Work** and shall name OCRRA and Onondaga County as Additional Insureds. Contractor will provide the following insurance:

- **A.** Worker's Compensation: Contractor's possession of worker's compensation insurance in accordance with the laws of the State of New York.
- **B.** Comprehensive General Liability:
 - General Aggregate: \$5,000,000
 - Each Occurrence (Bodily Injury and Property Damage: Combined single limit \$2,000,000
- **C.** Comprehensive Automobile Liability:
 - Each Occurrence (Bodily Injury and Property Damage: Combined single limit \$1,000,000
- D. Builder's Risk Insurance
- E. Continuity and Extent of Coverage: Contractor shall purchase and maintain the insurance required hereunder, effective for the full period of its performance as set forth in Paragraph 3 above. The insurance coverage shall be for protection of claims which may arise out of or result from Contractor's operations under this Contract, whether the operations be by the Contractor or by the Subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.
- **F.** Notice of Termination or Cancellation: The insurance coverage to be required under this Contract may not be terminated or cancelled unless OCRRA is given 30 days prior written notice by the insurance carrier and Contractor provides proof of equivalent alternative coverage.

13. HOLD HARMLESS

Contractor shall, to the fullest extent permitted by applicable law, indemnify, defend, and hold harmless OCRRA from any and all actions, claims, damages, losses and expenses, including but not limited to attorneys' fees, arising directly or indirectly out of Contractor's performance of the **Work**, regardless of whether OCRRA is partially negligent, excluding liability created by OCRRA's sole and exclusive negligence. OCRRA and Contractor agree to reservation by OCRRA of the right to contribution or indemnification from Contractor that would otherwise be barred by Section 11 of the Workers' Compensation Law.

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14. <u>INSPECTION OF SERVICES</u>

Contractor agrees that the Construction **Work** and/or other services it provides to OCRRA under this Contract will be subject to periodic inspection and testing by OCRRA or its outside designated inspection service, at its option, without unduly delaying the **Work**. Contractor will also maintain an adequate inspection system and perform its own such inspections as will assure that the **Work** performed under the Contract conforms to the Contract specifications and other requirements and make records of such inspections available to OCRRA. The **Work** will also be subject to a final inspection by OCRRA.

15. MATERIAL AND WORKMANSHIP

All equipment, material, and articles used in the **Work** covered by this Contract are to be of the most suitable grade for the purpose intended. Contractor will provide new equipment, materials, and articles to be used or incorporated into the **Work** unless the invitation to submit bids/proposals specifically permits the use of used goods and, the responsive Bid/Proposal specifies what used equipment, materials, and articles are intended to be used or incorporated into the **Work**. Reference to any equipment, materials, or articles by trade name or make shall be regarded as establishing a standard and the Contractor may, with OCRRA's prior written approval, substitute any material, equipment, or article which in the judgment of OCRRA is equal to that named.

16. ERRORS AND OMISSIONS

Contractor will be responsible for any defect, error, or omission in the execution of the **Work** plans, drawings, and specifications submitted, regardless of whether or not OCRRA had approved such plans, drawings, and specifications. Contractor will correct any such errors or omissions and any defective **Work** associated therewith during the performance of this Contract.

17. WARRANTY OF CONSTRUCTION/SERVICES

With respect to the Construction/Service **Work** performed by Contractor hereunder, Contractor agrees that, in addition to any other warranties set forth in the Contract, Contractor warrants that the **Work** performed under this Contract will conform to the Contract requirements and be free from defects in equipment, material, design, or workmanship for the entire warranty period set forth in the Invitation to Bid or Request for Proposals. Contractor further agrees that all of the services it performs under this Contract, including any goods or equipment supplied under this Contract, will be free from defects and conform to the Bid Specifications and the requirements of this Contract. Contractor agrees to promptly correct or re-perform any defective or non-conforming services at no cost to OCRRA and to replace any defective or non-conforming Goods or Equipment installed as part of the **Work** performed under this Contract. If Contractor fails or refuses to correct or reperform, OCRRA may, by Contract with a third party, or otherwise, correct or replace same with similar services, goods or equipment and charge to Contractor the entire cost incurred to OCRRA thereby or, alternatively, OCRRA may obtain an equitable adjustment in the Contract Sum set forth in Paragraph 4 above.

18. MANUFACTURERS' WARRANTIES

Contractor agrees that the manufacturers' warranties it receives that are applicable to any material, equipment, parts or components furnished or installed by Contractor under this Contract will survive the Contract and will run to OCRRA for the full term provided by the manufacturer, and will not be deemed to be exclusive, but in addition to any warranty provided by Contractor under this Contract.

19. <u>TITLE/LIENS</u>

Title to all drawings, designs, specifications, notes, and other architect-engineering work produced in performance of this Contract will, at the end of the Contract, vest in OCRRA. Title to any

Page 4 AGREEMENT

materials, parts, equipment or other items installed by Contractor under this Contract will vest in OCRRA immediately upon payment. Contractor will pay for all labor, services, materials, equipment and parts installed as part of the **Work** under this Contract as well as other expenses incurred by it or its suppliers in connection with the **Work** and Contractor will defend and indemnify OCRRA against all claims arising out of any unpaid accounts.

20. DOCUMENTS AND SAMPLES AT THE SITE

Contractor will maintain at the Project Site, on a current basis, one record copy of all drawings, specifications, addenda, change orders, and other modifications, in good order and marked currently to record all changes made during construction or the performance of other services. Upon completion of the **Work**, Contractor will provide OCRRA with two (2) copies of the "as built" drawings for the completed **Work**.

21. CHANGES

OCRRA may, at its sole option, at any time, and from time-to-time, by a written order, make changes within the general scope of this Contract, including but not limited to the definition of services to be performed, and the time (i.e. hours of the day, days of the week, etc.) and place of performance thereof. If any such change causes an increase or decrease in the cost of or the time required for the performance of any part of the **Work** under this Contract, whether changed or not changed by any such order, an equitable adjustment shall be made in the Contract price or performance schedule, or both, and the Contract shall be modified in writing accordingly. Any claim by the Contractor for an adjustment under this clause must be asserted by the Contractor in writing within fifteen (15) days from the date of receipt by the Contractor of the written change order unless OCRRA grants, in writing, an extension to the fifteen (15) day period. Charges for any extra work or material will not be allowed unless made pursuant to this clause. Other than the above, the terms and conditions contained in this Contract will not be added to, modified, superseded, or otherwise altered except by written notification signed by an authorized representative of OCRRA and the Contractor.

22. ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

If OCRRA prefers to accept defective or non-conforming **Work**, OCRRA may do so instead of requiring its removal and correction, in which case there will be a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effective whether or not final payment has been made.

23. CONCEALED CONDITIONS

Should concealed conditions be encountered in the Performance of the **Work** below the surface of the ground or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Invitation to Bid or Request for Proposals, or should unknown physical conditions below the surface of the ground or should concealed or unknown conditions in an existing structure, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in **Work** of the character provided for in this Contract, be encountered, the Contract Sum will be equitably adjusted upon a written request by either party made within twenty days after the first observance of such concealed conditions.

24. <u>USE AND POSSESSION PRIOR TO COMPLETION</u>

Unless it actually interferes with Contractor's performance of the **Work**, OCRRA shall have the right to take possession of or use any completed or partially completed part of the **Work** and such possession or use shall not be deemed an acceptance of any **Work** not completed in accordance with this Contract.

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25. NO WAIVER OF CONDITIONS

Failure of OCRRA to insist on strict performance shall not constitute a waiver of any of the provisions of this Contract by OCRRA or waiver of any other default of the Contractor.

26. TERMINATION

OCRRA reserves the right to terminate this Contract upon thirty (30) days written notice to Contractor. If this Contract is so terminated, OCRRA shall be liable only for the payment of services performed and approved prior to the effective date of termination, which for purposes herein is the date of mailing of the Notice of Termination. If Contractor refuses or fails to prosecute the **Work**, or any separate part thereof, with such diligence as will ensure its completion within the time specified herein, or any extension thereof, or fails to complete the **Work** within such time set forth in Paragraph 3, Period of Performance, OCRRA may, by written notice to the Contractor, terminate the Contractor's right to proceed with the **Work** or such part of the **Work** as to which there has been such a delay.

27. TERMINATION FOR FAILURE TO COMPLY WITH STATE FINANCE LAW

If the goods or services to be provided hereunder by Contractor to OCRRA exceeds \$15,000.00, in total, OCRRA reserves the right to terminate this contract, at any time during its term, by written notification to Contractor, in accordance with the notification provisions above, in the event it is found that the certification filed by the Contractor during the procurement process was intentionally false or intentionally incomplete or in the event that Contractor engages in an impermissible contact under State Finance Law Sections 139-j and 139-k.

28. PREVAILING WAGES

Where applicable, Contractor shall pay its employees the prevailing wages for work, labor or services as required by New York Labor Law Article 8 and Article 9.

29. <u>TAXES</u>

OCRRA is exempt from the payment of sales and compensating use taxes of the State of New York and of cities and counties on all materials, equipment, and supplies sold to OCRRA pursuant to this Contract. Also exempt from such taxes are purchases by the Contractor of materials, equipment, and supplies to be sold to OCRRA pursuant to this Contract, including tangible personal property to be incorporated into any structure, building or other real property hereunder.

30. PROTECTION OF BUILDINGS, EQUIPMENT AND VEGETATION

The Contractor shall use reasonable care to avoid damaging existing buildings, structures, equipment, and vegetation at OCRRA's facility. If the Contractor fails to do so, Contractor shall promptly replace or repair the damage at Contractor's expense. If Contractor refuses or fails to promptly make such repair or replacement, the Contractor shall be liable for the cost thereof which may be deducted by OCRRA from payments due or which may become due to the Contractor.

31. <u>INDEPENDENT CONTRACTOR/APPLICABILITY TO SUBCONTRACTORS</u> <u>AND SUPPLIERS</u>

In all matters relating to this Contract, Contractor shall be acting as an independent contractor. Contractor shall not have any authority to assume or create any obligation, express or implied on behalf of OCRRA and Contractor shall not have the authority to represent himself/herself/itself as an agent or employee of OCRRA. Each subcontractor and supplier shall be bound by all OCRRA Construction Services Contract documents to the same extent and with the same effect as if the subcontractor or supplier were the Contractor.

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32. BANKRUPTCY

Contractor agrees that if it becomes insolvent or makes a general assignment for the benefit of creditors, OCRRA may, at its option, terminate the balance of this Contract, in whole or in part.

33. NOTICE TO OCRRA OF LABOR DISPUTES

Contractor agrees that whenever it has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of its obligations under this Contract, it will immediately give OCRRA notice thereof, including all relevant information with respect to its effect on the timing or completion of the **Work**.

34. CONFIDENTIAL RELATIONSHIP

Contractor shall treat as confidential all information supplied by OCRRA to Contractor, to assist Contractor in its performance under this Contract, unless such information is in the public domain. Contractor shall not disclose any such information related to this Contract to any person not authorized by OCRRA to receive it.

35. CONFLICT OF INTEREST

Contractor hereby warrants that there is no conflict of interest with Contractor's other contracts or other employment, if any, with the activities to be performed by Contractor hereunder and that Contractor shall advise OCRRA if any conflict or potential conflict of interest exists or arises in the future.

36. NON-DISCRIMINATION

Contractor agrees that, in the hiring of employees and subcontractors to perform any **Work**, hereunder, it will not discriminate against any individual or firm on the basis of race, creed, color, gender, sexual orientation, or national origin.

37. EMERGENCIES

In the case of an emergency affecting the safety of persons or property, Contractor will act to prevent threatened damage, injury, or loss.

38. SAFETY

The Contractor shall be responsible for safety related to and during the performance hereunder. The Contractor shall ensure that its employees are notified of and observe and abide by all applicable safety regulations and laws. The Contractor shall take any additional precautions necessary or proper under the circumstances to prevent injury to or death of persons and/or damage to property.

39. CLEANING UP

Contractor agrees that it will keep the **Work** Site and storage areas free from accumulations of waste material or rubbish.

40 PROHIBITION OF ASSIGNMENT

This Contract cannot be assigned by Contractor without the prior written consent of OCRRA. Should OCRRA agree to such an assignment of this Contract, Contractor agrees, not withstanding OCRRA's approval of such an assignment, to remain fully liable for the performance of the **Work** in the event that its assignee does not fully perform all of the **Work** within the Period of Performance

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specified herein. Contractor will, in such event, also be responsible to OCRRA with respect to all covenants, obligations, and warranties set forth herein.

41. COMPLIANCE WITH LAWS

The Contractor shall comply with all applicable laws, ordinances, rules, and regulations including Federal, State and Municipal authorities, agencies and departments relating to or affecting the **Work** hereunder or any part thereof, and shall secure and obtain any and all permits, licenses, and consents as may be necessary in connection therewith.

42. APPLICABLE LAW

This Contract shall be interpreted in accordance with the laws of the State of New York.

43. **GENERAL CONDITIONS**

The General Conditions are attached hereto and incorporated by reference herein.

In Witness Whereof, the parties have executed this Contract.

ATTEST:	
Company Name:	Onondaga County Resource Recovery Agency
	By: Executive Director
	 100 Elwood Davis Road, North Syracuse, NY 13212
(Signature)	<u> </u>
(Print Name)	
(Print Title)	
Dated:	

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EXHIBIT A

STATEMENT OF WORK
Rock Cut Road Transfer Station Building 2
Optimization – Phase 2
5808 ROCK CUT ROAD, JAMESVILLE, NY 13078

EXHIBIT A

STATEMENT OF WORK Rock Cut Road Transfer Station Building 2 Optimization – Phase 2 5808 ROCK CUT ROAD, JAMESVILLE, NY 13078

OCRRA is seeking bids for construction related to optimization of the Rock Cut Road Transfer Station Building 2 in Jamesville, NY with work items outlined in the Contract Documents (Drawings and Specifications).

EXHIBIT B COMPETITIVE BID OR PROPOSAL SUBMITTED

EXHIBIT C CONTRACTOR SPECIFICATIONS, LITERATURE, WARRANTIES

EXHIBIT D PERFORMANCE BOND

PERFORMANCE BOND

Contractor	Surety		
Name:	Name:		
Address (principal place of business):	Address (principal place of business):		
Owner	Contract		
Name: Onondaga County Resource Recovery Agency (OCRRA)	Description (name and location):		
Mailing address (principal place of business):	OCRRA Rock Cut Road Transfer Station Building 2		
100 Elwood Davis Road, Syracuse New York	Optimization – Phase 2, Contract No		
13212	Contract Price:		
	Effective Date of Contract:		
Bond			
Bond Amount:			
Date of Bond:			
(Date of Bond cannot be earlier than Effective Date of Contract) Modifications to this Bond form: None See Paragraph 16			
Surety and Contractor, intending to be legally bound Performance Bond, do each cause this Performance agent, or representative.			
Contractor as Principal	Surety		
(Full formal name of Contractor)	(Full formal name of Surety) (corporate seal)		
By: (Signature)	By: (Signature)(Attach Power of Attorney)		
Name:	Name:		
(Printed or typed)	(Printed or typed)		
Title:	Title:		
Attest:	Attest:		
(Signature)	(Signature)		
Name: (Printed or typed)	Name:(Printed or typed)		
Title:	Title:		
Notes: (1) Provide supplemental execution by any additional pa			
Contractor, Surety, Owner, or other party is considered plural w	here 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 will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
- 4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
- 5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

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

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

14. Definitions

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

16	Modifications to this Bond are as follow	ις•
TU.	ividuitications to this bolla are as follow	3.

EXHIBIT E INSURANCE REQUIREMENTS/CERTIFICATE OF INSURANCE

EXHIBIT E

INSURANCE REQUIREMENTS

HOLD HARMLESS

Regarding the operations and responsibilities concerning this agreement, the Contractor further covenants and agrees to indemnify, defend and hold harmless OCRRA and Onondaga County, it officers, agents, the owner's hired Project Engineer, Cornerstone Engineering and Geology PLLC and employees from and against any and all loss or expense that may arise by reason of liability for damage, injury or death, or for invasion of personal or property rights, of every name and nature, and whether casual or continuing trespass or nuisance, and any other claim for damages arising at law and equity alleged to have been caused or sustained in whole or in part by or because of any omission of duty, negligence or wrongful act on the part of the Contractor, its employees or agents, or because of any joint omission of duty, negligence or wrongful act on the part of the Contractor and OCRRA, their officers, agents or employees in connection with this agreement.

INSURANCE BROAD FORM PROPERTY DAMAGE

The Contractor agrees to obtain and maintain General Liability Insurance including comprehensive Form, Premises/Operations, Products/Completed Operations, Broad Form Contractual, Independent Contractors and Personal Injury, with minimum limits of not less than five million dollars (\$5,000,000) combined single limit for bodily injury, including wrongful death, and property damage.

The Contractor also agrees to obtain and maintain Automobile Liability Insurance, including for owned, hired and non-owned vehicles with minimum limits of not less than one million dollars (\$1,000,000) combined single limit for bodily injury and property damage.

The Contractor also agrees to obtain and maintain Builder's Risk Insurance.

THE CONTRACTOR SHALL PROVIDE TO THE OWNER, OCRRA, A CERTIFICATE OF INSURANCE EVIDENCING THE ABOVE INSURANCE REQUIREMENTS AND SHALL NAME OCRRA, ONONDAGA COUNTY, AND GHD CONSULTING SERVICES INC. AS ADDITIONAL INSUREDS. THE CERTIFICATE SHALL CONTAIN A PROVISION THAT THE ISSUING COMPANY WILL NOTIFY OCRRA BY CERTIFIED MAIL THIRTY (30) DAYS PRIOR TO ANY CHANGE IN OR CANCELLATION OF THE POLICY.

STATUTORY COMPLIANCE

In acceptance of this agreement, the Contractor covenants and agrees to comply in all respects with all Federal, State and County laws which pertain hereto regarding services for municipal corporations including but not limited to Workers' Compensation and Employers' Liability Insurance, hours of employment, wages and Human Rights.

MAILING INSTRUCTIONS

The Certificate of insurance shall be mailed to:

OCRRA 100 Elwood Davis Road North Syracuse, NY 13212-4312 Attn: Ms. Cristina Albunio, PE

CERTIFICATE OF INSURANCE

THIS CERTIFIES to OCRRA, 100 Elwood Davis Road, North Syracuse, NY 13212-4312, that the following described policies have been issued to, and are in force now for:

NAME & ADDRESS			
OF INSURED:			
COVERING:			
Kind of Insurance	Company and Policy No.	Expiration Date	Limits of Liability
(X) Worker's Compensation			Statutory
(X) Disability Benefits Law			Statutory
(X) Comprehensive General Liability			CSL of \$2,000,000 OCC/\$5,000,000 Agg in the Primary Policy
(X) Comprehensive Auto Liability			CSL of \$1,000,000 per OCC Primary Policy
coverage until at least thir OCRRA. 2. The Comprehensive G products/completed operation coverage. 3. Personal injury liability coverage. 4. Broad form property damages. The exclusion for actions of	ot expire and/or non-renew by ty (30) days prior to written no eneral Liability policy spe ions, blanket broad form contra- erage is provided under bodily i	canceled, for otice has been cifically incluctual, and indeniury liability interiors.	any reason or restricted in given, by certified mail, to des premises/operations, pendent contractors liability insurance.
The above described policindicated.	cies have been endorsed as re endorsed to include OCRRA at	necessary to p	provide the limits of liability
Name of Insurance Agency		Signature of <i>i</i>	Authorized Representative

Telephone Number

Date

Address of Insurance Agency

EXHIBIT F CERTIFICATE OF NON-COLLUSION

EXHIBIT F

CERTIFICATE OF NON-COLLUSION

Non-collusive Certifications required of all bidders/proposers/quoters under Section 103-d of the General Municipal Law as amended by Chapter 751 of the Laws of 1965 and Chapter 675 of the Laws of 1966 effective September 1, 1966, is as follows:

By submission of this bid/proposal/quote, the bidder/proposer/quoter and each person signing on behalf of the bidder/proposer/quoter certifies, and in the case of a joint bid/proposal/quote each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

- (1) The prices in this bid/proposal/quote have been arrived at independently without collusion, consultation, communications, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other bidder/proposer/quoter or with any competitor.
- (2) Unless otherwise required by law, the prices which have been quoted in this bid/proposal/quote have not been knowingly disclosed by the bidder/proposer/quoter and will not knowingly be disclosed by the bidder/proposer/quoter prior to opening, directly or indirectly, to any other bidder/proposer/quoter or to any competitor; and
- (3) No attempt has been made or will be made by the bidder/proposer/quoter to induce any other person, partnership, or corporation to submit or not to submit a bid/proposal/quote for the purpose of restricting competition.

			Legal Name of B	idder/Proposer/Quoter	(Typed)
			Address		(Typed)
			City	State	Zip
		BY:	Signature		
			Name		(Typed)
			Title		(Typed)
Dated	, 20				

EXHIBIT G CONFLICT OF INTEREST AFFIDAVIT

EXHIBIT G

CONFLICT OF INTEREST AFFIDAVIT

ST	ATE OF)		
COUNTY OF)) ss:)) ss:)	
			g duly sworn, deposes and says for and on behalf of	
1.	Our (my) firm,date submitted a bid, p Resource Recovery Age		, is an independent firm or company, and has this to provide goods and/or services to the Onondaga County	
2.	indirect, which could cor	nflict in any mann	or quoter that it and its employees have no interest, direct or er or degree with the performance or provision of these goods Resource RecoveryAgency.	
3.	the Onondaga County employed by the firm. I	Resource Recov assume full resp	s that in providing the goods or in the rendering of services to very Agency, no persons having any such interest shall be consibility for knowing whether my (our) employees or agents or that no such interest exists.	
Da	ted:	, 20	Ву:	
			For and on Behalf of:	
Sw	orn before me this	_day of	, 20	

EXHIBIT H

NOTICE OF AWARD NOTICE TO PROCEED

NOTICE OF AWARD

Date	of Issuance:		
Owne	er:		Owner's Project No.:
Engir	eer:		Engineer's Project No.:
Proje	ct:		
Conti	act Name:		
Bidde	er:		
Bidde	er's Address:		
		at Owner has accepted your Bio Bidder and are awarded a Cont	d dated for the above Contract, and that you ract for:
Ro	ck Cut Road	Transfer Station Building 2 Op	otimization Phase 2 Contract No
based	on the provi		. Contract Price is subject to adjustment but not limited to those governing changes, Unit Price sis, as applicable.
Contra		its accompanies this Notice of A	accompany this Notice of Award, and one copy of the Award, or has been transmitted or made available to
	Drawing	gs will be delivered separately f	rom the other Contract Documents.
	ust comply v of Award:	with the following conditions pr	ecedent within 15 days of the date of receipt of this
1.	Deliver to	Owner TWO counterparts of th	e Agreement, signed by Bidder (as Contractor).
2.	payment b		Contract security (such as required performance and ation, as specified in the Instructions to Bidders and in
3.	Other cond	ditions precedent (if any):	
		with these conditions within the Notice of Award, and declare y	e time specified will entitle Owner to consider you in our Bid security forfeited.
counte	erpart of the		onditions, Owner will return to you one fully signed additional copies of the Contract Documents as ions.
Owne	er:	Onondaga County Resource	Recovery Agency
By (si	gnature):		
Name	e (printed):		
Title:			
Copy:	Engineer		

NOTICE TO PROCEED

	DATE:
Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	Rock Cut Road Transfer Station Building 2 Optimization Phase 2
Contract Name:	
run on	ifies Contractor that the Contract Times under the above Contract will commence to pursuant to Paragraph 4.01 of the General Conditions.
	Site prior to such date.
In accordance with	the Agreement:
"Notice to Proof days to achie	days to achieve Substantial Completion is 105 days from said commencement date of ceed" , resulting in a date for Substantial Completion of; and the number eve readiness for final payment is 120 days from said commencement date of "Notice a date for readiness for final payment of
Before starting any	Work at the Site, Contractor must comply with the following:
Owner:	Onondaga County Resource Recovery Agency
By (signature):	
Name (printed):	
Title:	
Date Issued:	
Copy: Engineer	

EXHIBIT I SAMPLE PARTIAL PAYMENT ESTIMATE FORM

Form RD 1924-18 (Rev. 6-97)

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL DEVELOPMENT

1			
PARTIAL	PAYMENT	ESTIMATE	NO.

CONTRACT NO.

. FA	RW SERVICE AG	ENC I
PARTIAL	PAYMENT	ESTIMATE

DACE	 	

OWNER:			CONTRACTOR:	,		PERIOD	OF ESTIMATE
OVIII TO			COMMOTOR.	•			o. Lotimint L
						FROM	то
CO	NTRACT CHANGE	ORDER SUM	MARY		ES	TIMATE	
	Agency Approval	Ar	nount	4 Original Contr	act		,
No.	Date	Additions	Deductions		rs /		
	1				ract (1 + 2)		
				4 Work Comple	ted*		,
				·			
				1	5)		
				7 Peteineen*			
					(6-7-8)		•
TOTAL				* Detailed break	·. ·		
NET C	IANGE						
			CONTR	ACT TIME			
Original (days)							
,			On Schedule	Yes	Starting Date		
•				☐ No	Projected Compl		
CONTRACTOR'S CERTIFICATION: The undersigned Contractor certifies that to the knowledge, information and belief the work-co payment estimate has been completed in acc the contract documents, that all amounts have the contractor for work for which previous paym was issued and payments received from the ov current payment shown herein is now due.		vered by this cordance with been paid by ent estimates	The insp qua	pected and to the lantities shown in this	ifies that the wo best of their knows s estimate are co	ON: rk has been carefully wledge and belief, the rrect and the work has contract documents.	
				Architect	or Engineer		
Contractor				AUMOUL	s, _ng		
				n. .			
D.,				ъу		····	
БУ				Date_	!	,	
Date							
APPROVED BY				Th	correctness of the	quantities show	mate does not attest to n or that the work has contract documents.
Owner							
				Ву			
Bv				Title			
						1.1	
Date		· · · · · · · · · · · · · · · · · · ·		Date			

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0575-0042. The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

TYPICAL UNIT PRICE BREAKDOWN *

CONTRACT (revised) THIS PERIOD TOTAL TO DATE					%				
ITEM	DESCRIPTION	QUANTIT	LINIT	AMOUNT	QUAN		QUANTITY	AMOUNT	COM- PLETE
	•		\$	\$		\$		\$	
	•								
			•						
	TOTALS								
	TYPICAL LUN	MP SUM PRICE BRE	EAKDOWN *			TYPI AND F	CAL STORED MATE RETAINAGE BREAKI	ERIALS DOWN *	
				OMPLETED	%	MATERIALS STO	RED AT END OF TH		OD
ITEM	DESCRIPTION	SCHEDULED VALUE	THIS PERIOD	TO DATE	COM- PLETE	DESCRIPTION	QUANTITY	VALUE	MOUNT
		\$	\$	\$				\$ \$	
1	· ·						RETAINAGE		,
			:				THIS ESTIMATE	PERCENT RE	TAINED
						WORK COMPLETED:	\$	% \$	
						STORED MATERIALS:			
						OTHER (explain)			. :
	TOTALS					TOTAL			

^{*} As a minimum, detailed breakdowns should contain this information.

EXHIBIT J SAMPLE CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS

EXHIBIT J

SAMPLE CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS

OWNER	CON	TRACTOR		
ENGINEER	FUNDING AGENCIES			
TO (Owner): CONTRACT FOR:				
PROJECT (Name, address):	CON	TRACT DATE:		
STATE OF) COUNTY OF)) SS:			
	RELEASE OF LIEN	S		
The undersigned, having receiv construction or repair of the improfurnished in the execution and waive any and all claims, liens, a property and the owner thereof.	ovements upon the property loon and fulfillment of control Owner, datedday control	cated atcontract between sa of 20, do (does)	, and aid Contractor hereby release and	
Lien or Claimant	Work or Materials	Amount	Date	
(Provide attachments as needed	.)			
Contractor:				
By (Owner/Officer):				
Address:				
Subscribed and sworn to before	me thisday of	, 20		
Notary Public:	My Comi	mission Expires:		
Seal:				

EXHIBIT K SAMPLE CONTRACT CHANGE ORDER FORM

Form	RD	1924-7
Rev.	2-9	ת

UNITED STATES DEPARTMENT OF AGRICULTURE RURAL DEVELOPMENT AND FARM SERVICE AGENCY

ORDER NO.	
DATE	2007
STATE	

FARM SERVICE AGEN	icy	DATE		
CONTRACT CHANGE	ORDER	STATE		
CONTRACT FOR		COUNT	Y	2
OWNER				
То	ii ii			
You are hereby requested to comply with the following changes from the c	ontract plans an	i specifications	:	**
Description of Changes (Supplemental Plans and Specifications Attached)	DEC	RBASE ract Price	INCREASE in Contract Price	
9-	\$		\$ 4	
	2:			
		8		
		53	35	
	et			_
TOP AT O		- a -	#:	**
TOTALS	2	7		
NET CHANGE IN CONTRACT PRICE	<u>s</u>	11		
			• 7	
a .				
The amount of the Contract will be (Decreased) (Increased) By The	Sum Of:	80		
		Dollars (S	-9	6
The Control Table State		•		
The Contract Total Including this and previous Change Orders Will	Be:			
		Dollars (S	·).
The Contract Period Provided for Completion Will Be (Increased) (I	Decreased) (Un	ichanged);		Days.
This document will become a supplement to the contract and all pro-			10	
lequested	- •	_		
(On	ner)		(Dete)	72
Recommended				٠
(Owner's Architect/Engla	eer)		(Date)	
(Contrac			(Date)	
Approved by Agency	unio unio		<i>-</i>	- 2
(France and Ti	ony		(Date)	

Public reporting starting for this callection of information is estimated to everage 15 minutes per respecte, including the time for reviewing instructions, near-ling data sources, gathering and maintaining the data medical, and completing and reviewing this collection of information. Seed community regarding this harden estimate or any other separal of this collection of information, including progressions for reducing this burden, is U.S. Department of Agriculture, Clearums Officer, STOP 7602, 1400 independence Assume, S.F., Westington, D.C. 2020-7602. Please BO NOT RETURN this form to this address. Parvent to the local USDA affice only. You are not required to respect to hist-collection of information unless it displays a currently valid CMB control member.

EXHIBIT L

IDENTIFICATION OF CONTRACT DRAWINGS

The Contract Drawings show the character and scope of the work to be performed and have been prepared or approved by Engineer. Contractors shall refer to all Drawings. The drawings, all of which constitute an integral part of the Contract Documents as approved for construction on the date so designated on said drawings, and are listed below by sheet number and title:

- a. Cover Sheet
- b. Sheet C1, General Notes
- c. Sheet C2, Existing Site Conditions & Operations Plan
- d. Sheet A-1, Code Sheet
- e. Sheet A-2, Basement Life Safety Plan
- f. Sheet A-3, First Floor Life Safety Plan
- g. Sheet A-4, Existing Basement Plan
- h. Sheet A-5, Existing First Floor Plan
- i. Sheet A-6, Basement Demo Plan
- j. Sheet A-7, First Floor Demo Plan
- k. Sheet A-8, Basement Floor Plan
- I. Sheet A-9, First Floor Plan
- m. Sheet S001, Structural Notes & Special Instructions
- n. Sheet S101, Partial Demolition Plan at Foundation
- o. Sheet S102, Partial Demolition Plan at Tipping Floor
- p. Sheet S103, Partial Foundation Plan
- q. Sheet S104, Partial Framing Plan at Tipping Floor
- r. Sheet S201, Sections
- s. Sheet S202, Sections
- t. Sheet FP1, Fire Protection: Basement Floor Plans
- u. Sheet P1, Plumbing: Basement Floor Plans
- v. Sheet P2, Plumbing: First Floor Plan
- w. Sheet E1, Electrical: First Floor Plan

CONSTRUCTION PLANS FOR THE

ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION - PHASE II

PREPARED FOR ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

5808 ROCK CUT ROAD, JAMESVILLE, NEW YORK

AUGUST 2022

CIVIL C1 GENERAL NOTES C2 EXISTING SITE CONDITIONS & OPERATIONS PLAN ARCHITECTURAL A-1 CODE SHEET A-2 BASEMENT LIFE SAFETY PLAN A-3 FIRST FLOOR LIFE SAFETY PLAN A-4 EXISTING BASEMENT PLAN A-5 EXISTING FIRST FLOOR PLAN A-6 BASEMENT DEMO PLAN A-7 FIRST FLOOR DEMO PLAN A-8 BASEMENT FLOOR PLAN A-9 FIRST FLOOR PLAN

	SHEET INDEX			
CON	TRACT NO. 1 - GENERAL TRANSFER STATION BUILDING 2 OPTIMIZATION - PHASE II			
STR	UCTURAL			
S001	STRUCTURAL NOTES & SPECIAL INSPECTIONS			
S101	PARTIAL DEMOLITION PLAN AT FOUNDATION			
S102	PARTIAL DEMOLITION PLAN AT TIPPING FLOOR			
S103	PARTIAL FOUNDATION PLAN			
S104	PARTIAL FRAMING PLAN AT TIPPING FLOOR			
S201	SECTIONS			
S202	SECTIONS			
CONT	RACT NO. 2 - PLUMBING & FIRE SUPPRESSION BUILDING 2 OPTIMIZATION - PHASE II			
FIRE	PROTECTION			
FP1	FIRE PROTECTION: BASEMENT FLOOR PLANS			
PLU	PLUMBING			
P1	PLUMBING: BASEMENT FLOOR PLAN			
P2	PLUMBING: FIRST FLOOR PLAN			
	CONTRACT NO. 3 - ELECTRICAL BUILDING 2 OPTIMIZATION - PHASE II			
ELE	CTRICAL			
E1	ELECTRICAL: FIRST FLOOR PLAN			



100 CRYSTAL RUN ROAD SUITE 101 MIDDLETOWN, NEW YORK 10941 Tel: (877) 294-9070 Fax (845) 692-5894







Unauthorized alteration or addition to this plan bearing a

licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies

- 2. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO PERFORM THE WORK UNDER THE CONTRACT AS DETAILED IN THESE CONTRACT DOCUMENTS.
- 3. THE WORK TO BE PERFORMED FOR THIS PROJECT SHALL INCLUDE ALL WORK SHOWN ON THE CONSTRUCTION PLANS AND DESCRIBED IN THE TECHNICAL SPECIFICATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS, TECHNICAL SPECIFICATIONS, AND ADDENDUMS (IF ANY). SHOULD A CONFLICT ARISE BETWEEN THE CONSTRUCTION PLANS, TECHNICAL SPECIFICATIONS, AND/OR ADDENDUMS (IF ANY) THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION. THE DIRECTIVE PROVIDED BY THE ENGINEER IN RESPONSE TO THE CONFLICT SHALL GOVERN.
- 4. CONTRACTOR SHALL PLAN ON VEHICULAR TRAFFIC ASSOCIATED WITH THE EXISTING TRANSFER STATION MOVING IN AND OUT OF THE AREA OF THE PROJECT SITE AS DEPICTED ON SHEET NO. C2 "EXISTING SITE CONDITIONS & OPERATIONS PLAN" THROUGHOUT THE CONTRACT. AREAS OUTSIDE OF THE DEPICTED LIMIT OF WORK AND CONTRACTOR STAGING AREA ARE TO BE ASSUMED TO BE UTILIZED FOR ACTIVE TRANSFER STATION OPERATIONS BY THE OWNER.
- 5. CONTRACTOR SHALL CONSTRUCT ALL WORK TO ACCOMMODATE THE OWNER'S OCCUPANCY REQUIREMENTS THROUGHOUT THE DURATION OF THE PROJECT AND COORDINATE THE CONSTRUCTION SCHEDULE AND OPERATIONS WITH THE OWNER, ENGINEER, AND SUBCONTRACTORS (IF ANY).
- 6. CONTRACTOR SHALL COOPERATE WITH THE OWNER TO MINIMIZE CONFLICT AND TO FACILITATE THE OWNER'S OPERATIONS AND SHALL SCHEDULE WORK TO ACCOMMODATE THIS REQUIREMENT.
- 7. THE ONONDAGA COUNTY RESOURCE RECOVERY AGENCY'S ROCK CUT ROAD TRANSFER STATION IS CURRENTLY OPEN TO THE PUBLIC FROM 6:30 AM TO 7:00 PM MONDAY THROUGH FRIDAY, AND SATURDAY 8:00 AM TO 12:00 PM. THE OWNER IS EXPECTED TO BE OPERATIONAL ON SITE FROM 3:00 AM TO 10:00 PM MONDAY THROUGH FRIDAY, AND SATURDAY 7:00 AM TO 2:00 PM. HOURS MAY BE EXTENDED IN CONFORMANCE WITH THE SOLID WASTE MANAGEMENT FACILITY PERMIT (SEE TECHNICAL SPECIFICATION SECTION 01 10 00 "SUMMARY OF WORK").
- 8. WEEKEND WORK MAY BE ALLOWED BY THE OWNER. HOURS OF OPERATION WILL BE ESTABLISHED AT THE PRE-CONSTRUCTION MEETING.

CONSTRUCTION NOTES:

- 1. CONTRACTOR IS ADVISED THAT EXISTING SITE FACILITIES IN THE VICINITY OF THE PROJECT (SERVICE AREAS, TRANSFER STATION BUILDINGS 1 & 3, TRUCK SCALES, SCALE HOUSE, OFFICES, AND EMPLOYEE FACILITIES) ARE ACTIVE AND WILL REMAIN IN USE BY THE OWNER AND/OR OTHERS AS DEPICTED ON SHEET NO. C2 "EXISTING SITE CONDITIONS & OPERATIONS PLAN". THEREFORE, UNLESS OTHERWISE PERMITTED, THE CONTRACTOR SHALL PERFORM THE PROPOSED WORK AND PROVIDE THE NECESSARY CONTROLS SUCH THAT SAFE PEDESTRIAN AND VEHICULAR ACCESS TO ALL EXISTING SITE FACILITIES ARE MAINTAINED AT ALL TIMES. ALL WORK SHALL BE COORDINATED WITH THE OWNER AND PERFORMED SUCH AS TO NOT IMPEDE OR INTERFERE WITH OPERATIONS SUPPORTING THE FACILITY.
- 2. ALL ABOVEGROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY UNLESS NOTED OTHERWISE. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH IS NOT KNOWN. SIZE, DEPTH, CONDITION, AND LOCATION OF ALL UTILITIES AND STRUCTURES IN THE VICINITY OF WORK MUST BE VERIFIED BY CONTRACTOR BY APPROPRIATE MEANS INCLUDING CONTACTING APPROPRIATE AUTHORITIES.
- 3. THE CONTRACTOR SHALL COORDINATE WITH, AND OBTAIN APPROVAL FROM, THE OWNER BEFORE COMMENCING ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.
- 4. THE CONTRACTOR SHALL CONTACT THE OWNER AND ENGINEER AT LEAST THREE (3) BUSINESS DAYS PRIOR TO CONDUCTING OUTDOOR CONSTRUCTION OR UNDERGROUND DISTURBANCE OF ANY KIND.
- 5. CONTRACTOR SHALL VERIFY AND IDENTIFY THE EXACT LOCATIONS OF ALL UTILITIES AND CONSTRUCTIONS IDENTIFIED PRIOR TO COMMENCING WORK IN THE PROJECT AREA.
- 6. SITE CLEANUP AND HOUSEKEEPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 7. CONTRACTOR SHALL KEEP THE WORK AREA CLEAN, HAZARD FREE, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY
- 8. CONTRACTOR SHALL CONFINE MATERIALS AND STORAGE, AND CONSTRUCTION OPERATIONS TO THE LIMITS SHOWN AND/OR INDICATED BY LAWS, ORDINANCES, PERMITS, AND THE DIRECTIONS OF THE OWNER AND/OR ENGINEER, SO AS TO NOT UNREASONABLY ENCUMBER THE PREMISES WITH SUCH MATERIALS, BUT SHALL STORE THEM IN ORDERLY FASHION SO THAT THEY WILL NOT INTERFERE WITH THE WORK UNDER CONTRACT OR WITH THE OPERATION OF THE OWNER'S FACILITIES. CONTRACTOR SHALL NOT LOAD NOR PERMIT ANY PART OF THE WORK TO BE LOADED WITH A WEIGHT THAT WILL ENDANGER ITS SAFETY OR UNDULY AFFECT THE STRUCTURE OR ANY PART THEREOF. CONTRACTOR SHALL ENFORCE THE INSTRUCTIONS OF THE OWNER REGARDING SIGNS, FIRES, AND SMOKING.
- 9. CONTRACTOR STAGING AREAS AND STOCKPILES OF MATERIAL SHALL BE IN AREAS APPROVED OR DESIGNATED BY THE OWNER AND ENGINEER DURING THE PRE—CONSTRUCTION MEETING.
- 10. CONTRACTOR OR ANY OF THEIR EMPLOYEES SHALL ONLY PARK VEHICLES AT LOCATIONS AS SHOWN OR AS SPECIFICALLY APPROVED BY THE OWNER FOR THIS PURPOSE.
- 11. CONTRACTOR SHALL CONDUCT ACTIVITIES ASSOCIATED WITH THIS WORK IN A MANNER CONSISTENT WITH ANY AND ALL REQUIREMENTS OF THE OWNER INCLUDING, BUT NOT LIMITED TO, SITE USE, PROTECTION OF PERSONS AND PROPERTY, WASTE CONTAINMENT, SITE SECURITY. AND NOTIFICATION.
- 12. UNLESS OTHERWISE DIRECTED BY THESE CONSTRUCTION PLANS, OR ALLOWED BY THE AUTHORITIES HAVING JURISDICTION, ALL EXISTING FACILITIES SHALL BE PROTECTED AND SHALL REMAIN IN SERVICE AND ACCESSIBLE.
- 13. THE CONTRACTOR SHALL PROVIDE APPROPRIATE ON—SITE TOILET FACILITIES FOR CONTRACTOR AND ALL SUB—CONTRACTOR'S EMPLOYEES DURING ALL PHASES OF CONSTRUCTION. THE OWNER'S TOILET FACILITIES WILL NOT BE AVAILABLE FOR THE CONTRACTOR'S LISE.
- 14. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONTRACT DOCUMENTS (CONSTRUCTION PLANS, TECHNICAL SPECIFICATIONS, AND ADDENDUMS (IF ANY)) ON SITE AT ALL TIMES AND ENSURE THE DISTRIBUTION OF NEW REQUIREMENTS TO SUB-CONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD BID DOCUMENTS SHALL BE MARKED VOID AND REMOVED FROM THE PROJECT AREA.
- 15. CONTRACTOR SHALL FURNISH COMPLETE SETS OF RECORD DRAWINGS, ONE (1) ELECTRONIC COPY (.PDF OR APPROVED EQUAL) AND FOUR (4) HARD COPIES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK, TO THE OWNER WITHIN FIVE (5) DAYS OF SUBSTANTIAL COMPLETION OF THE PROJECT. AT A MINIMUM, THE AS—BUILT DRAWINGS SHALL INCLUDE ALL FEATURES, STRUCTURES, UTILITIES, EQUIPMENT, AND APPURTENANCES DEPICTED WITHIN THE CONTRACT DOCUMENTS, AS WELL AS ALL THIRD PARTY VENDOR DRAWINGS AS DESCRIBED WITHIN SECTION 01 70 00 OF THE TECHNICAL SPECIFICATIONS.
- 16. PRIOR TO SUBMISSION OF BIDS, PROSPECTIVE CONTRACTORS SHALL FIELD—VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, OFFSETS, CLEARANCES, AND EXISTING CONDITIONS AT THE SITE AND CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN. PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE PROJECT AREA, THE CONTRACTOR SHALL COMMUNICATE, IN WRITING, TO THE OWNER AND ENGINEER ANY DISCREPANCIES OR CONFLICTS IDENTIFIED.
- 17. CONTRACTOR SHALL REVIEW ALL OF THE CONTRACT DOCUMENTS (CONSTRUCTION PLANS, TECHNICAL SPECIFICATIONS, AND ADDENDUMS (IN ANY)) AND COORDINATE ALL WORK SHOWN IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF CONTRACT DOCUMENTS TO ALL SUB—CONTRACTORS AND ALL RELATED PARTIES. THE SUB—CONTRACTORS SHALL EXAMINE ALL THE CONTRACT DOCUMENTS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
- 18. CONTRACTOR SHALL COORDINATE IN ORDER TO PROVIDE A COMPLETE, FUNCTIONING BUILD—OUT WITH ALL FINISHED SITE, UTILITY, STRUCTURAL, ARCHITECTURAL, FIRE PROTECTION, PLUMBING COMPONENTS, ELECTRICAL COMPONENTS, AND APPURTENANCES TO PROVIDE ALL ITEMS AS SHOWN, INDICATED, OR REQUIRED IN THE CONTRACT DOCUMENTS.
- 19. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR, AND EQUIPMENT TO COMPLETE THE WORK AS REQUIRED IN THE CONTRACT DOCUMENTS AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
- DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

 21. ANY DISTURBANCE OUTSIDE OF THE LIMITS OF THE BUILDING STRUCTURE SHALL BE COORDINATED WITH AND APPROVED BY

20. CONTRACTOR SHALL RECEIVE, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY

- THE OWNER AND ENGINEER, IN WRITING, PRIOR TO THE CONTRACTOR ENGAGING IN THESE ACTIVITIES.
- 22. DISTURBANCE TO EXISTING SITE CONDITIONS OUTSIDE THE DEPICTED LIMIT OF WORK SHALL BE MINIMIZED. THE CONTRACTOR SHALL DOCUMENT CONDITION AND EXTENT OF EXISTING SITE CONDITIONS SUBJECT TO DAMAGE. ALL DISTURBANCE OR DAMAGE SHALL BE RESTORED TO PRE—CONSTRUCTION CONDITIONS BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE BY THE OWNER.
- 23. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE
- 24. ALL WORK PERFORMED AND MATERIALS/EQUIPMENT INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. STRUCTURES, WATER UTILITIES, AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND ALL STATE AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND
- 25. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING BEST SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED BY THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACTS INCLUDING CONTACT AND COORDINATION WITH THE OWNER AND THE ENGINEER.

- 26. WHERE THE WORK OF THIS PROJECT INCLUDES INSTALLATIONS IN THE IMMEDIATE VICINITY OF EXISTING TELECOMMUNICATIONS SYSTEMS, THE CONTRACTOR SHALL PROVIDE AND COORDINATE THE METHODS OF PROTECTION OF EXISTING FACILITIES WITH THE VARIOUS TELECOMMUNICATION CARRIERS, AS APPLICABLE.
- 27. THE CONSTRUCTION PLANS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. AS DESCRIBED WITHIN SECTION 01 50 01 OF THE TECHNICAL SPECIFICATIONS, THE CONTRACTOR SHALL PREPARE A SITE SPECIFIC HEALTH AND SAFETY PLAN (HASP) TO PROVIDE SPECIFIC GUIDELINES AND ESTABLISH PROCEDURES FOR THE PROTECTION OF PERSONNEL PERFORMING THE SCOPE OF ACTIVITIES DESCRIBED IN THE CONTRACT DOCUMENTS. THE HASP SHALL BE PREPARED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR ALL ON—SITE SAFETY REQUIREMENTS PERTAINING TO THE PROJECT FROM THE TIME THE CONTRACT IS AWARDED UNTIL ALL WORK IS COMPLETE, INSPECTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 28. WHEN DISTURBED, EXISTING FACILITIES SHALL BE REPAIRED OR REPLACED IN KIND AND IN ACCORDANCE WITH THE REQUIREMENTS OR DIRECTION OF THE OWNER. ASSOCIATED COSTS SHALL BE BORNE BY THE CONTRACTOR THAT CAUSED THE DISTURBANCE.
- 29. CONTRACTOR SHALL APPROPRIATELY BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE
- 30. CONTRACTOR SHALL NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION REQUIRES ACCEPTANCE BY THE OWNER AND ENGINEER.
- 31. FOR CONTRACTS NO. 1 AND 2 (GENERAL AND PLUMBING & FIRE INSPECTION), OWNER SHALL SECURE AND PAY FOR PERMITS, INSPECTIONS, AND TESTING REQUIRED FOR THE CONSTRUCTION ELEMENTS INCLUDED WITHIN THE CONTRACT AS DESCRIBED WITHIN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL PLAN AND COORDINATE ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES HAVING JURISDICTION, THE OWNER, OR THE ENGINEER AND SUBMIT COPIES OF THE ACCEPTANCE CERTIFICATES TO OWNER PRIOR TO COMPLETION OF THE PROJECT. A MINIMUM FORTY—EIGHT (48) HOUR NOTICE SHALL BE PROVIDED TO THE INSPECTOR, OWNER, AND/OR ENGINEER UNLESS OTHERWISE REQUIRED BY THE INSPECTOR.
- 32. FOR CONTRACT NO. 3 (ELECTRICAL), OWNER SHALL SECURE AND PAY FOR PERMITS REQUIRED FOR THE CONSTRUCTION ELEMENTS INCLUDED WITHIN THE CONTRACT AS DESCRIBED WITHIN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL SECURE AND PAY FOR INSPECTIONS AND TESTING REQUIRED FOR THE CONSTRUCTION ELEMENTS INCLUDED WITHIN THE CONTRACT AS DESCRIBED WITHIN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL PLAN AND COORDINATE ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES HAVING JURISDICTION, THE OWNER, OR THE ENGINEER AND SUBMIT COPIES OF THE ACCEPTANCE CERTIFICATES TO OWNER PRIOR TO COMPLETION OF THE PROJECT. A MINIMUM FORTY-EIGHT (48) HOUR NOTICE SHALL BE PROVIDED TO THE INSPECTOR, OWNER, AND/OR ENGINEER UNLESS OTHERWISE REQUIRED BY THE INSPECTOR.
- 33. CONSTRUCTION DETAILS IN THESE CONSTRUCTION PLANS ARE TYPICAL AND INTENDED TO DEPICT THE END RESULT OF DESIGN. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS SO LONG AS THEY DO NOT CHANGE THE DESIGN INTENT. SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK AND INCLUDED IN THE RECORD DRAWINGS.
- 34. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY THE CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITIONS PER MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL FURNISH AND INSTALL THESE ITEMS AT NO COST TO THE OWNER OR ENGINEER.
- 35. IN ACCORDANCE WITH SECTION 01 33 00 OF THE TECHNICAL SPECIFICATIONS, CONTRACTOR SHALL PREPARE AND SUBMIT A LIST OF PROPOSED SUBMITTALS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. SHOP DRAWINGS FOR ALL MATERIALS, PRODUCTS, AND FABRICATIONS INCLUDED ON THE APPROVED LIST OF SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. PRIOR TO THEIR SUBMITTAL, THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS, INCLUDING THOSE REQUIRED FROM SUBCONTRACTORS. SHOP DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTAL TO THE ENGINEER FOR REVIEW. ELECTRONIC COPIES (.PDF OR SUITABLE ALTERNATIVE) ARE ACCEPTABLE AND SHALL BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO MATERIAL PURCHASE. SUBSTITUTIONS AND DESIGN CHANGE REQUESTS SHALL BE CLEARLY NOTED OR SUBMITTAL MAY BE REJECTED UPON RECEIPT. ALLOW TEN (10) WORKING DAYS FOR REVIEW FROM THE DATE OF RECEIPT BY THE ENGINEER.
- 36. WHERE ENCOUNTERED IN THE WORK, ALL EXISTING ACTIVE UTILITIES SHALL BE PROTECTED AT ALL TIMES. WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, EXISTING UTILITIES SHALL BE RELOCATED AS DIRECTED BY THE AUTHORITIES HAVING JURISDICTION, THE OWNER, AND ENGINEER. EXTREME CAUTION SHALL BE USED BY THE CONTRACTOR WHEN PERFORMING WORK AROUND OR NEAR UTILITIES.
- 37. ALL EXISTING INACTIVE UTILITIES, OR UTILITIES TO BE REMOVED AS PART OF THE PROJECT, WHICH INTERFERE WITH THE EXECUTION OF THE WORK SHALL BE TERMINATED, REMOVED, AND/OR ABANDONED TO LIMITS BEYOND THE PROPOSED WORK, SUBJECT TO THE AUTHORITIES HAVING JURISDICTION, THE OWNER, AND THE ENGINEER.
- 38. ALL SERVICE SHUTDOWNS, INCLUDING BUT NOT LIMITED TO ELECTRIC, WATER, TELEPHONE, HVAC, AND PLUMBING SYSTEMS IN THE EXISTING BUILDINGS AND/OR STRUCTURES, SHALL BE STRICTLY COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES AND THE OWNER.

Unauthorized alteration or addition to this plan bearing a licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies from the original of this plan marked with an original professional's seal shall be considered to be valid true copies.

APPLICABLE REGULATIONS.

N.Y.P.E. Lic. Notor Quite 1

REV DATE DESCRIPTION DWN BY DES BY CHK BY APP BY

DATE OF ISSUE DRAWN BY BPF CHECKED BY ACS
AUGUST 2022 DESIGNED BY ACS APPROVED BY RAH



OFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

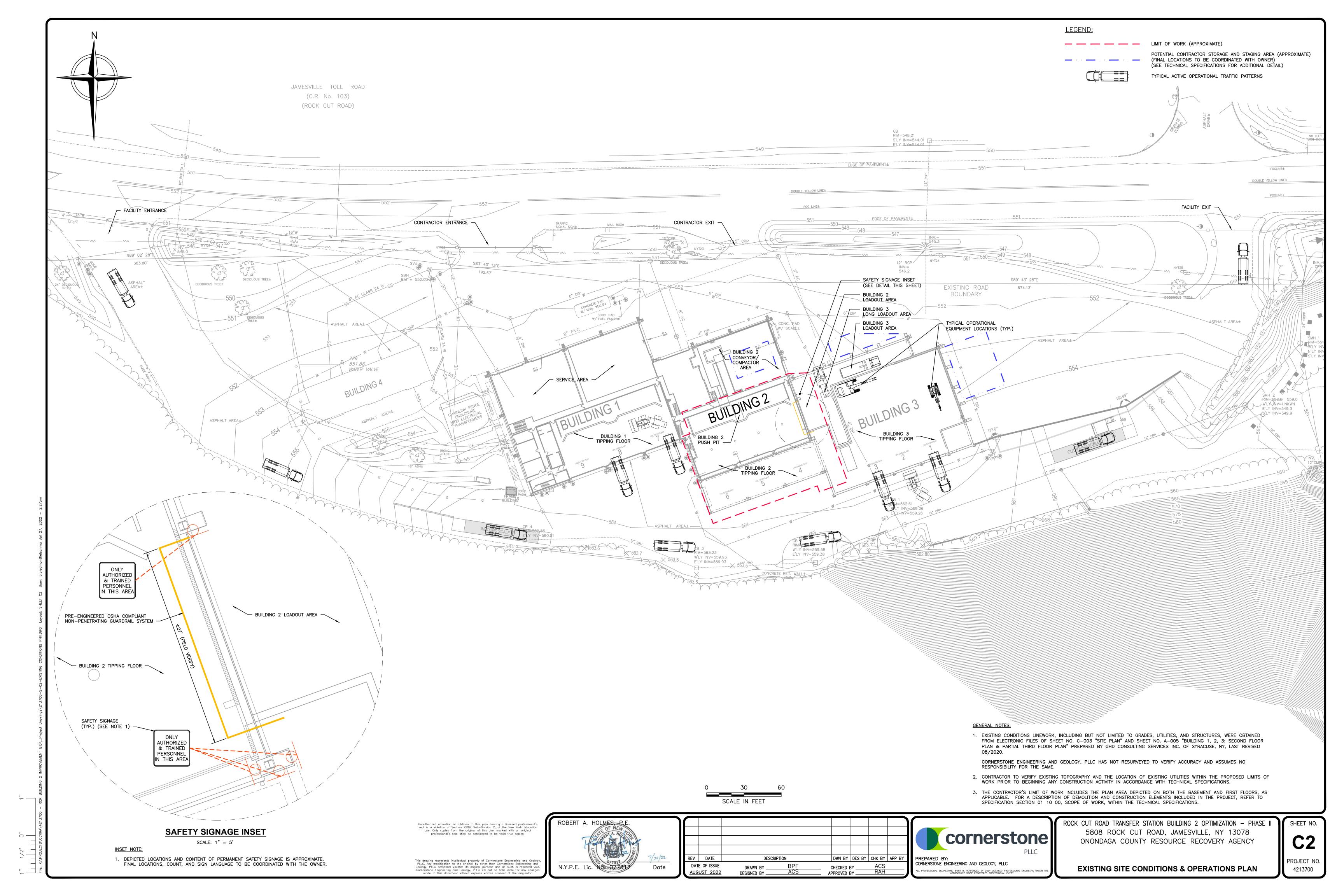
ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION - PHASE II 5808 ROCK CUT ROAD, JAMESVILLE, NY 13078 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

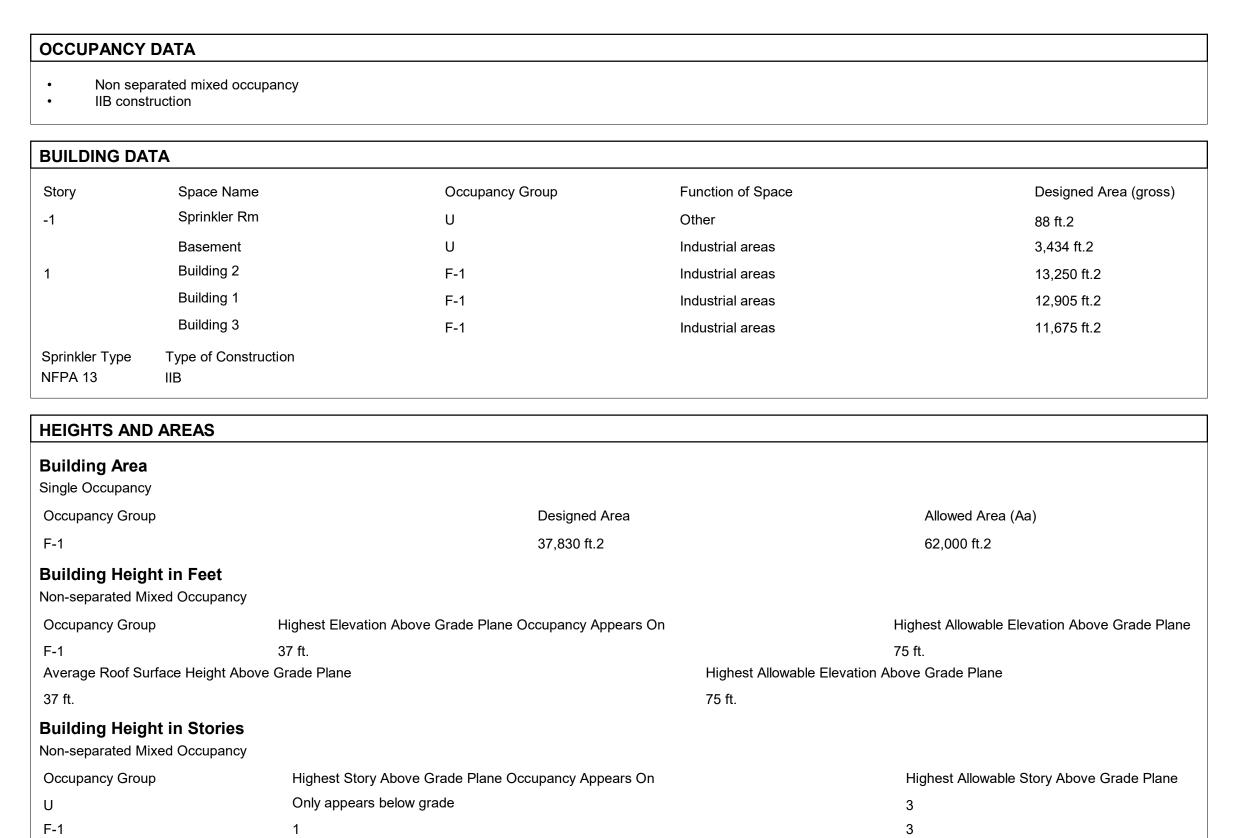
PROJECT NO 4213700

SHEET NO.

PLLC. Any modification to the original by other than Cornerstone Engineering and Geology, PLLC personnel violates its original purpose and as such is rendered void. Cornerstone Engineering and Geology, PLLC will not be held liable for any changes made to this document without express written consent of the originator.

NONDAGA COUNTY RESOURCE RECOVERY AG





NO WORK TO BE

PERFORMED IN THIS AREA

BUILDING 2

EXISTING TIPPING

<u>FLOOR</u>

 $FI = 7447 \, SF$

= 7,447 S.F. ALTERATION LEVEL 2

EXISTING FIRST FLOOR PLAN

WALL MOUNTED FIRE

SUPRESSION PIPING, WATER

WALL HEIGHT REDUCTION \$

LOADOUT SPILL SHIELD

--- PLUMBING & ELECTRICAL

BUILDING 3

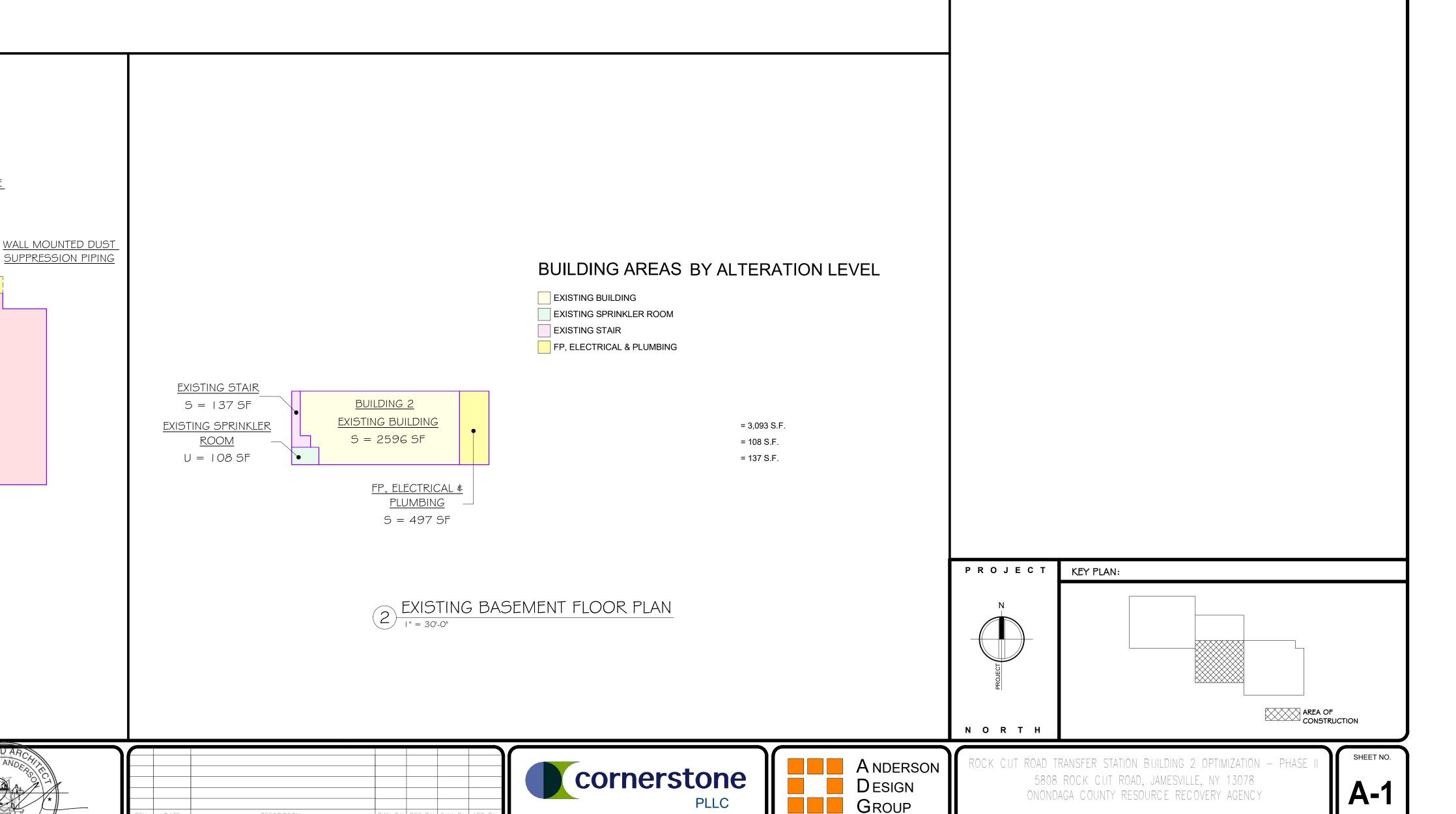
NO WORK TO BE

PERFORMED IN THIS AREA

REMOVAL

SUPPLY PIPING, LOADOUT KNEE

Occupa	nt Loads						
Story	Space Name	Occupancy Group	Function of Space	Designed Area (gross)	Designed Area (net)	OLF	Occupant Loa
-1	Sprinkler Rm	U	Other	88 ft.2	-	Custom	
	Basement	U	Industrial areas	3,434 ft.2	-	100	35
1	Building 2	F-1	Industrial areas	13,250 ft.2	-	100	133
	Building 1	F-1	Industrial areas	12,905 ft.2	-	100	130
						400	4.47
More than or other sp Maximum	pecial conditions (see rexit access travel distant	notes below).		11,675 ft.2 path of egress travel distance ar values below for each occupanc Max Exit Access Travel Di	y group.	100 y be required ur	117 nder high occupant
More than or other sp Maximum Occupand	its per Space on one exit must be proving pecial conditions (see result access travel distances)	ided if the space occupant hotes below).	oad or maximum common	path of egress travel distance an values below for each occupanc Max Exit Access Travel Di	y group.		
More than or other sp Maximum Occupand	its per Space on one exit must be proving pecial conditions (see result access travel distances)	ided if the space occupant hotes below).	oad or maximum common	path of egress travel distance and values below for each occupance Max Exit Access Travel Divided to the following travel of the following path of the fol	y group.		
More than or other sp Maximum Occupand F-1 U	its per Space on one exit must be proving pecial conditions (see result access travel distancy Group	ided if the space occupant hotes below).	oad or maximum common ould be at a maximum the	path of egress travel distance an values below for each occupanc Max Exit Access Travel Di	y group.		
More than or other sp Maximum Occupand F-1 U a. Groups F	its per Space on one exit must be proving pecial conditions (see result access travel distancy Group	ided if the space occupant notes below). ance serving each space shall be specified as a light of the space occupant in the space o	oad or maximum common ould be at a maximum the	path of egress travel distance and values below for each occupance Max Exit Access Travel Divided to the following travel of the following path of the fol	y group.		
More than or other sp Maximum Occupand F-1 U a. Groups F Max. De	its per Space n one exit must be prove pecial conditions (see researched conditions) exit access travel distancy Group F-1 and S-1 have an increase ad-End Corridor L	ided if the space occupant notes below). ance serving each space shall be specified as a light of the space occupant in the space o	oad or maximum common ould be at a maximum the	path of egress travel distance and values below for each occupance. Max Exit Access Travel Did 400 ft. (See note a) 400 ft.	y group.		
More than or other sp Maximum Occupand F-1 U a. Groups F Max. De	its per Space none exit must be proving pecial conditions (see research exit access travel distancy Group F-1 and S-1 have an increase ad-End Corridor Leach corridors within each of the corridors within each of the corridors and the corridors within each of the corridors.	ided if the space occupant inotes below). ance serving each space shace shace serving each space shace serving each space shace sha	oad or maximum common ould be at a maximum the	path of egress travel distance and values below for each occupance. Max Exit Access Travel Did 400 ft. (See note a) 400 ft.	y group. stance		



CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

IDEA

25 WALLKILL AVE • MONTGOMERY • NY 12549 O. 845.294.2724 | F. 845.675.1230 WWW.ADGARCHITECT.COM.

NOTE: NOT ALL NOTES MAY

BE USED ON THIS DRAWING

PROJECT NO.

21136

CONSTRUCTION NOTES

I. FIRE ALARM SYSTEM CURRENTLY PROVIDED AND TO BE MAINTAINED AT THE END OF CONSTRUCTION. 2. EMERGENCY LIGHTING CURRENTLY PROVIDED AND TO BE MAINTAINED AT THE END OF CONSTRUCTION.

5. ASBESTOS SURVEY PLANNING AND DESIGN: SEE ASBESTOS SURVEY REPORT PROVIDED BY OWNER.

ASSEMBLY, AREAS OF REFUGE, FIRE EXTINGUISHERS, LOAD LIMITS, RESTRICTED AREAS.

SERVICES; FINAL RULE; DEPARTMENT OF JUSTICE; CURRENT EDITION.

E. FED-STD-795-UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS): 1988. F. 29 CFR 1910-OCCUPATIONAL SAFETY AND HEALTH STANDARDS; (2016 SUPPLEMENT).

JURISDICTION, INCLUDING ALL APPLICABLE AMENDMENTS AND SUPPLEMENTS

M. ICC (IECC)-INTERNATIONAL ENERGY CONSERVATION CODE; 2020.

P. ICC (IECC)-INTERNATIONAL ENERGY CONSERVATION CODE; 2020. Q. ICC (IPMC)-INTERNATIONAL PROPERTY MAINTENANCE CODE 2020.

N. ICC ATT7.1-ACCESSIBLE AND USAGE BUILDINGS AND FACILITIES; 2009.

9. SUMMARY OF APPLICABLE CODES/REFERENCE STANDARDS:

RULE; DEPARTMENT OF JUSTICE; CURRENT EDITION.

SUBSEQUENT AMENDMENTS AND UPDATES.

I. NFPA 101-LIFE SAFETY CODE; 2020.

J. ICC (IBC)-INTERNATIONAL BUILDING CODE; 2020. K. ICC (IPC)-INTERNATIONAL PLUMBING CODE; 2020.

R. ICC (IFC)-INTERNATIONAL FIRE CODE: 2020.

T. UCS NY-UNIFORM CODE SUPPLEMENT; 2020.

V. CURRENT LOCAL MUNICIPAL CODES

O. ICC (IMC)- INTERNATIONAL MECHANICAL CODE; 2020.

U. ICC (IFGC)-INTERNATIONAL FUEL GAS CODE I FGC NY 2020.

W. NYEBC - EXISTING BUILDING CODE OF NEW YORK 2020.

8. CODE REQUIRED SIGNAGE: PUBLIC RESTROOMS, TRUSS ID, EXITS, STAIRWELLS, OCCUPANCY, AREAS OF

A. REGULATORY REQUIREMENTS APPLICABLE TO THIS PROJECT ARE THE FOLLOWING, INCLUDING ALL

B. 28 CFR 35-NONDISCRIMINATION ON THE BASIS DISABILITY IN STATE AND LOCAL GOVERNMENT

C. 28 CFR 36-NONDISCRIMINATION BY PUBLIC ACCOMMODATIONS AND IN COMMERCIAL FACILITIES; FINAL

D. 36 CFR | | 9 | -AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES; ARCHITECTURAL BARRIERS ACT (ABA) ACCESSIBILITY GUIDELINES; CURRENT EDITION.

G. STATE OF NEW YORK AMENDMENTS TO SOME OR ALL OF THE FOLLOWING (2016, 2017 SUPPLEMENT).

S. ECC SUPP NY-SUPPLEMENT TO THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE;

10. SECTION 2808.8 FIRE FIRE EXTINGUISHERS: PORTABLE FIRE EXTINGUISHERS COMPLYING SECTION 906 WITH A MINIMUM RATING A:6-B:C SHALL BE PROVIDED ONLY VEHICLES AND EQUIPMENT OPERATING ON PILES AND ALL PROCESSING EQUIPMENT.

CODE SHEET

L. NFPA 70-NATIONAL ELECTRICAL CODE; MOST RECENT EDITION ADOPTED BY AUTHORITY HAVING

RESPONSIBILITY.

CONSTRUCTION CODE.

3. GENERAL CONTRACTOR MUST SUBMIT AN ACKNOWLEDGMENT STATEMENT TO THE ARCHITECT THAT THEY HAVE READ AND UNDERSTAND THE BUILDING CODE DATA PROVIDED ON THIS SHEET AND CHAPTER 33 OF THE 2020 NYS

REQUIREMENTS OF THE LATEST EDITION OF THE NEW YORK STATE BUILDING CODE. I DO HEREBY CERTIFY THAT THESE DRAWINGS, TO THE BEST OF MY KNOWLEDGE AND PROFESSIONAL JUDGMENT, HAVE BEEN DESIGNED IN CONFORMANCE WITH ALL APPLICABLE REQUIREMENTS OF NEW YORK STATE ENERGY CONSERVATION

BUILDING CODE ENTITLED: 'SAFEGUARDS DURING CONSTRUCTION' AND SECTION 1704.4 'CONTRACTOR'S

4. STATE BUILDING CODE CERTIFICATION: I DO HEREBY CERTIFY THAT THESE DRAWINGS, TO THE BEST OF MY KNOWLEDGE AND PROFESSIONAL JUDGMENT, HAVE BEEN DESIGNED IN CONFORMANCE WITH ALL APPLICABLE

BUILDING I

NO WORK TO BE

PERFORMED IN THIS AREA

EXISTING STAIR

 $S = 73 \, SF$

DEMOLITION WORK IN THIS

EXISTING TIPPING FLOOR

NO WORK TO BE PERFORMED

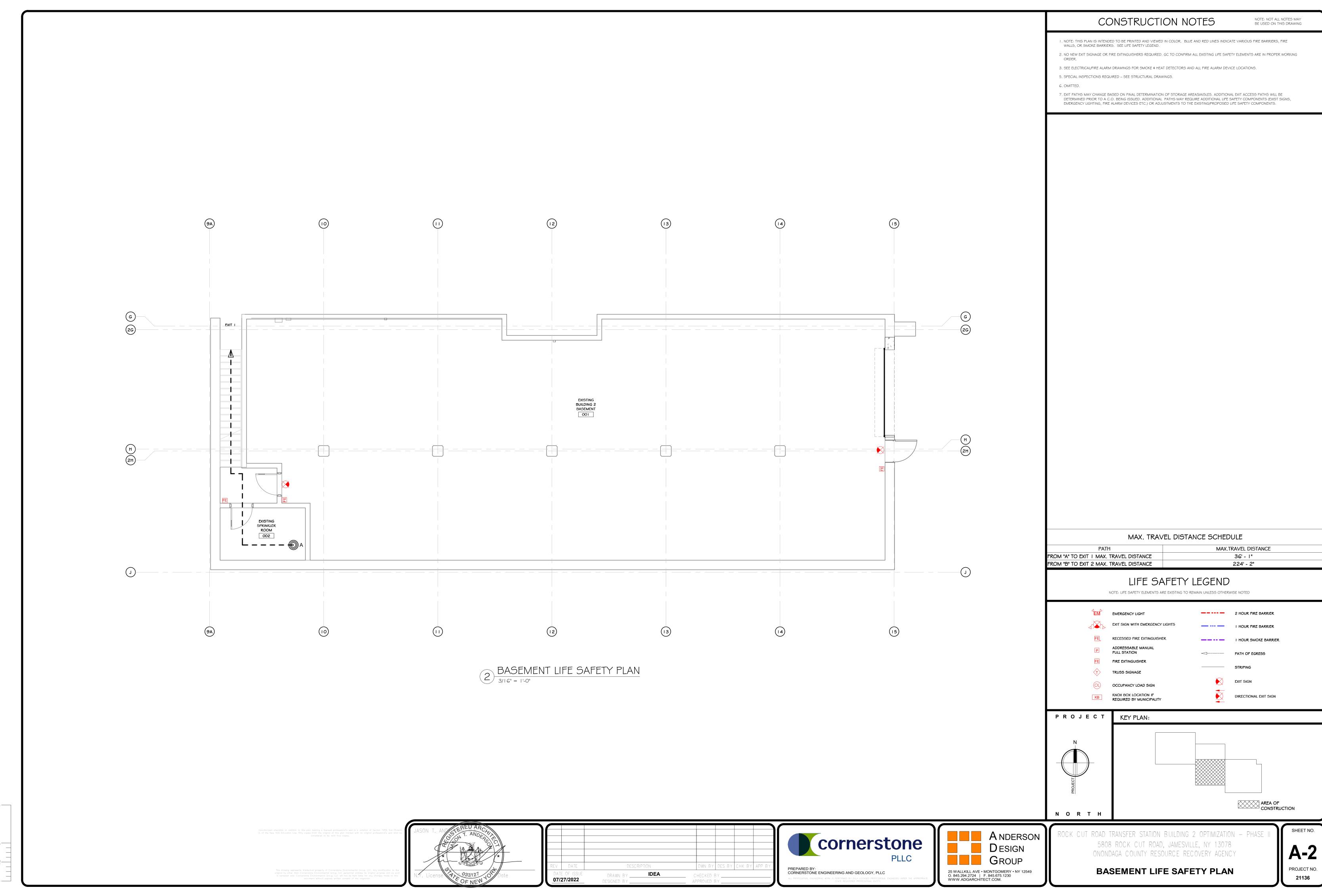
EXISTING STAIR

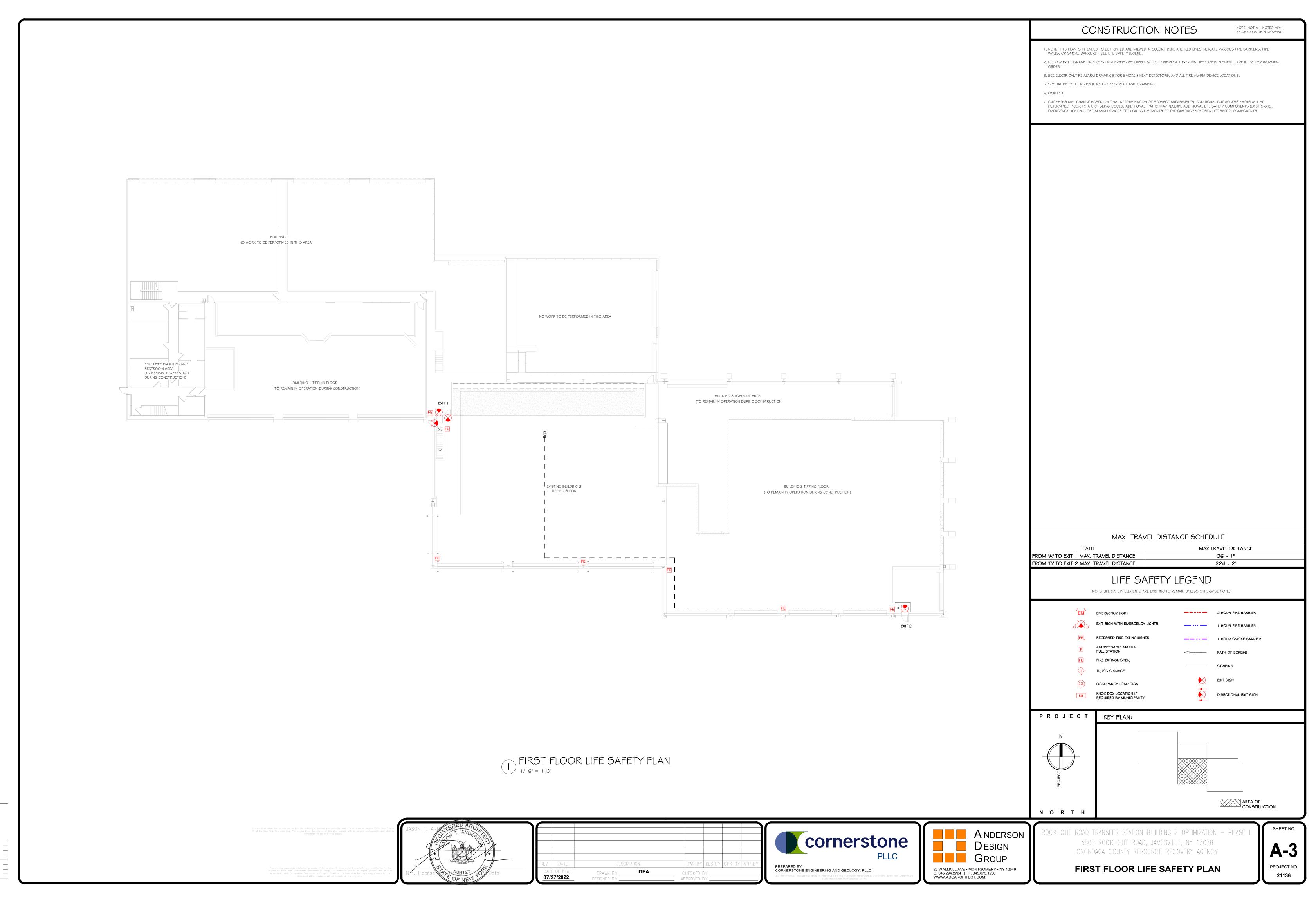
IN THIS AREA

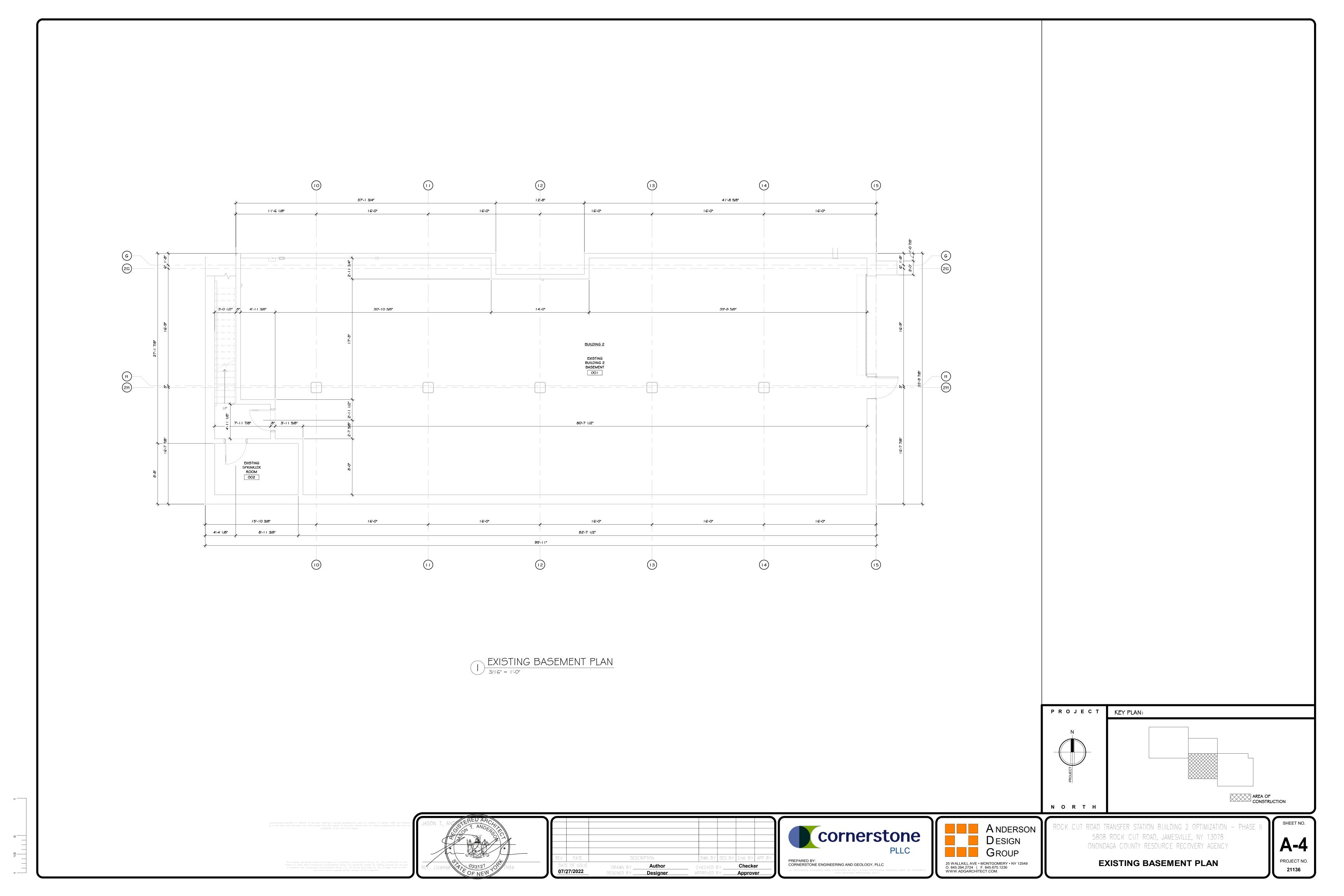
BUILDING AREAS BY ALTERATION LEVEL

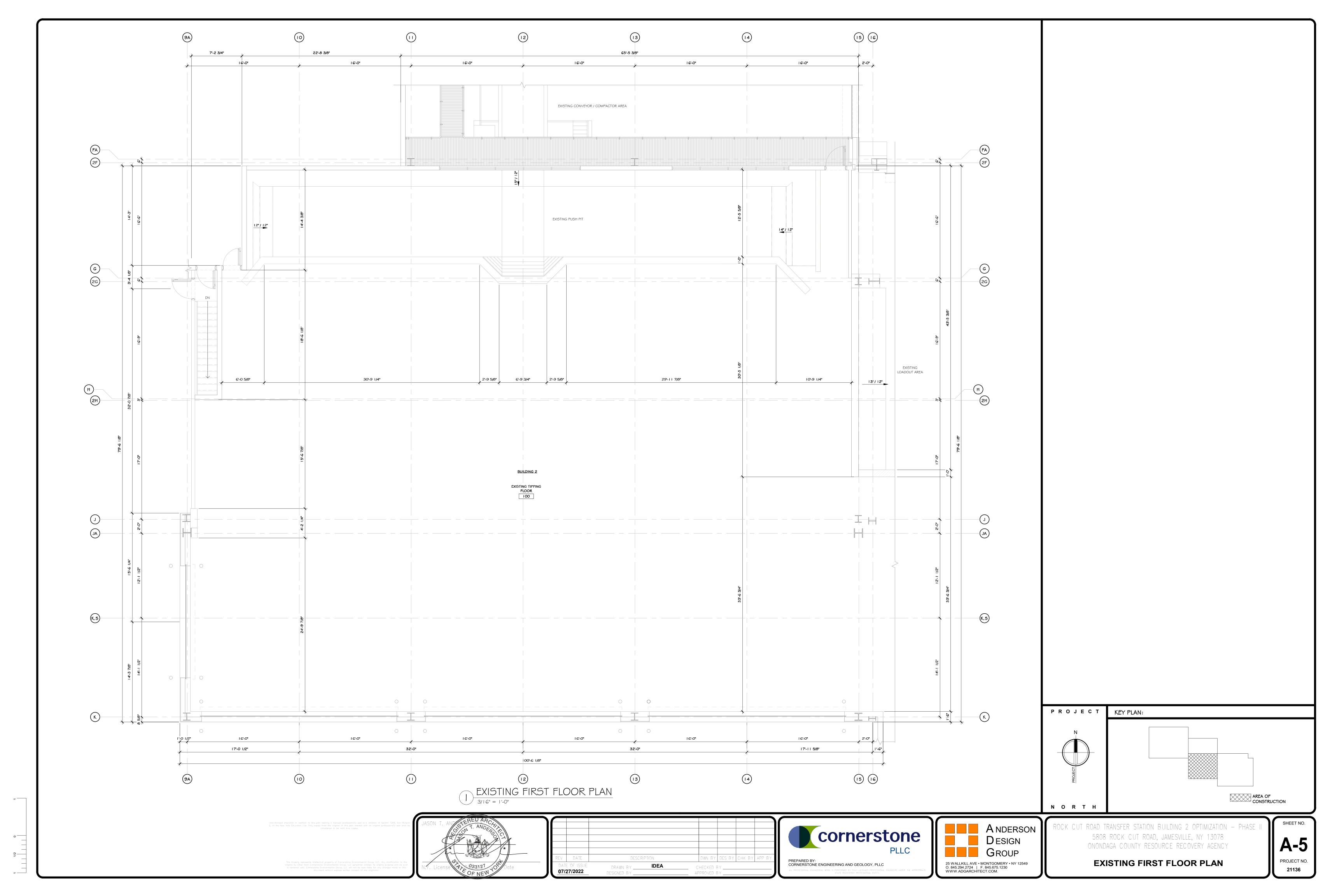
= 1,564 S.F.

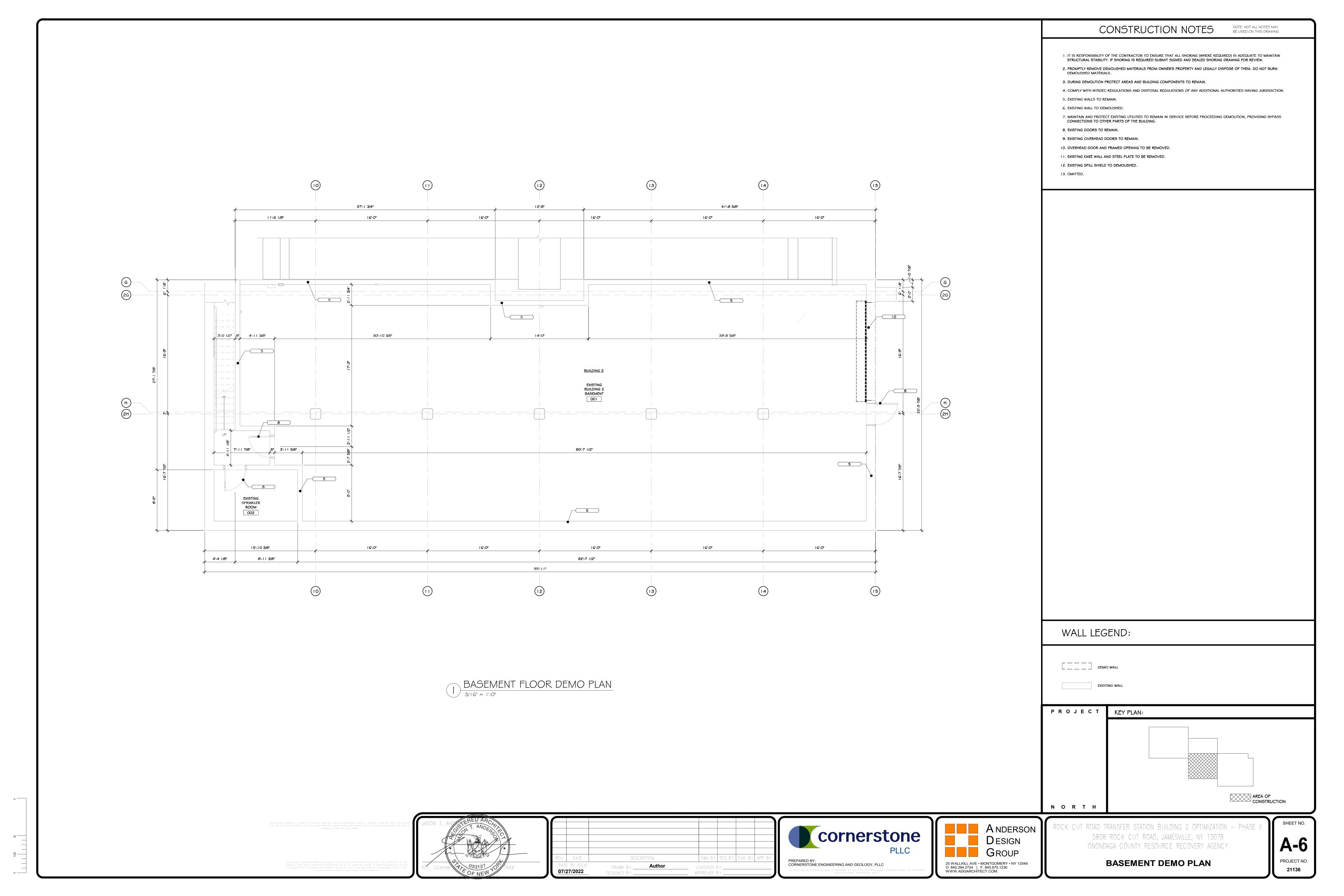
= 28,385 S.F.

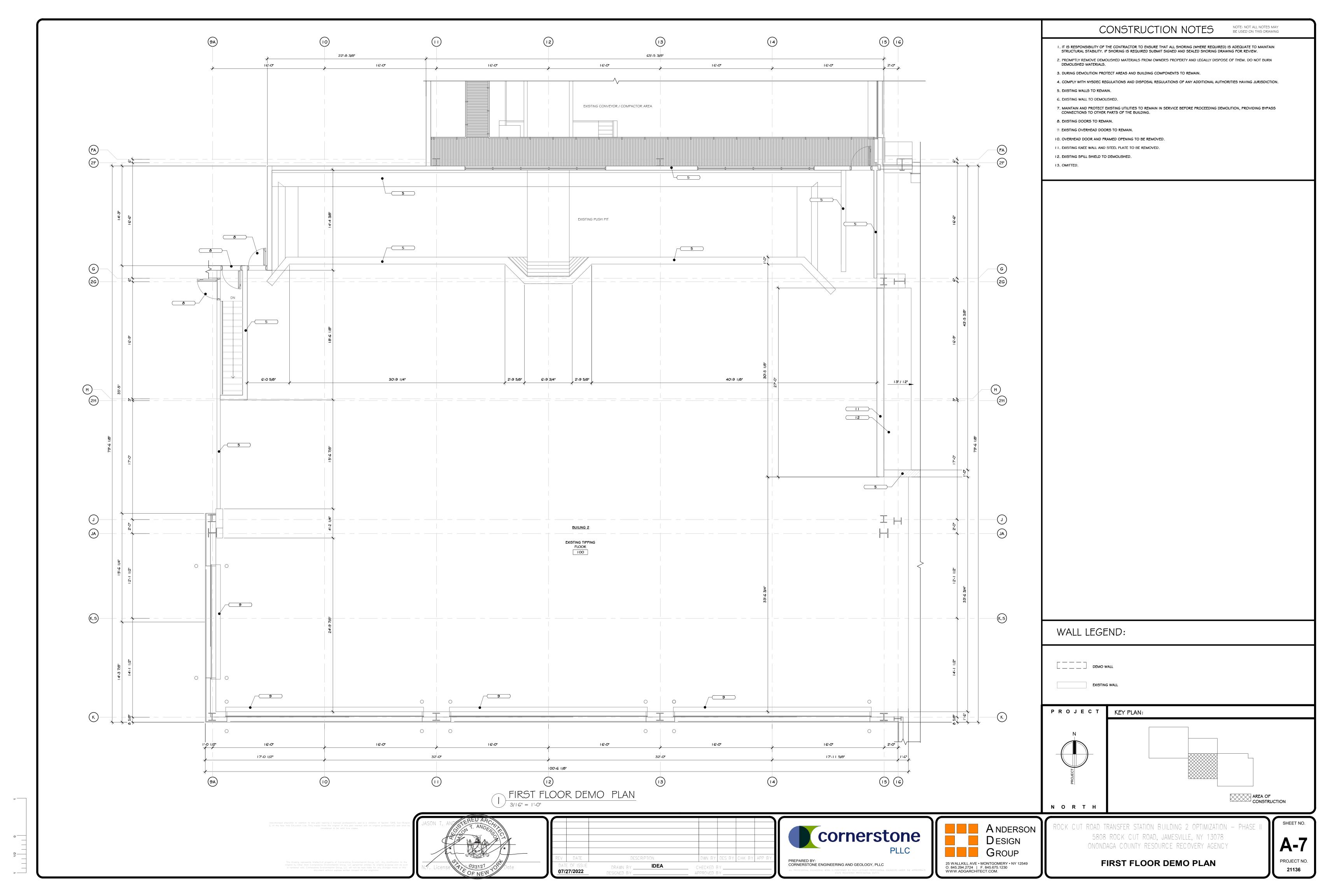


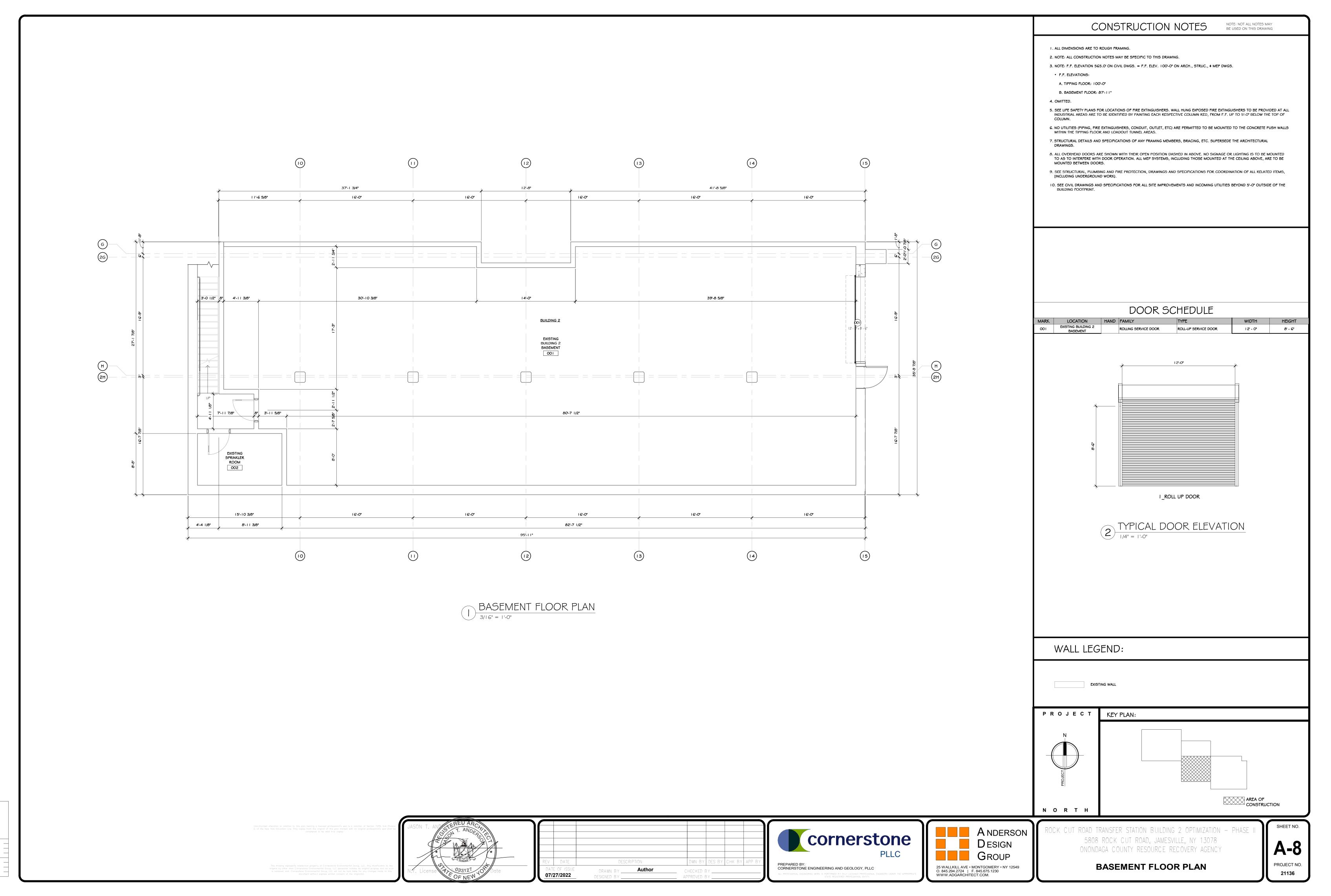


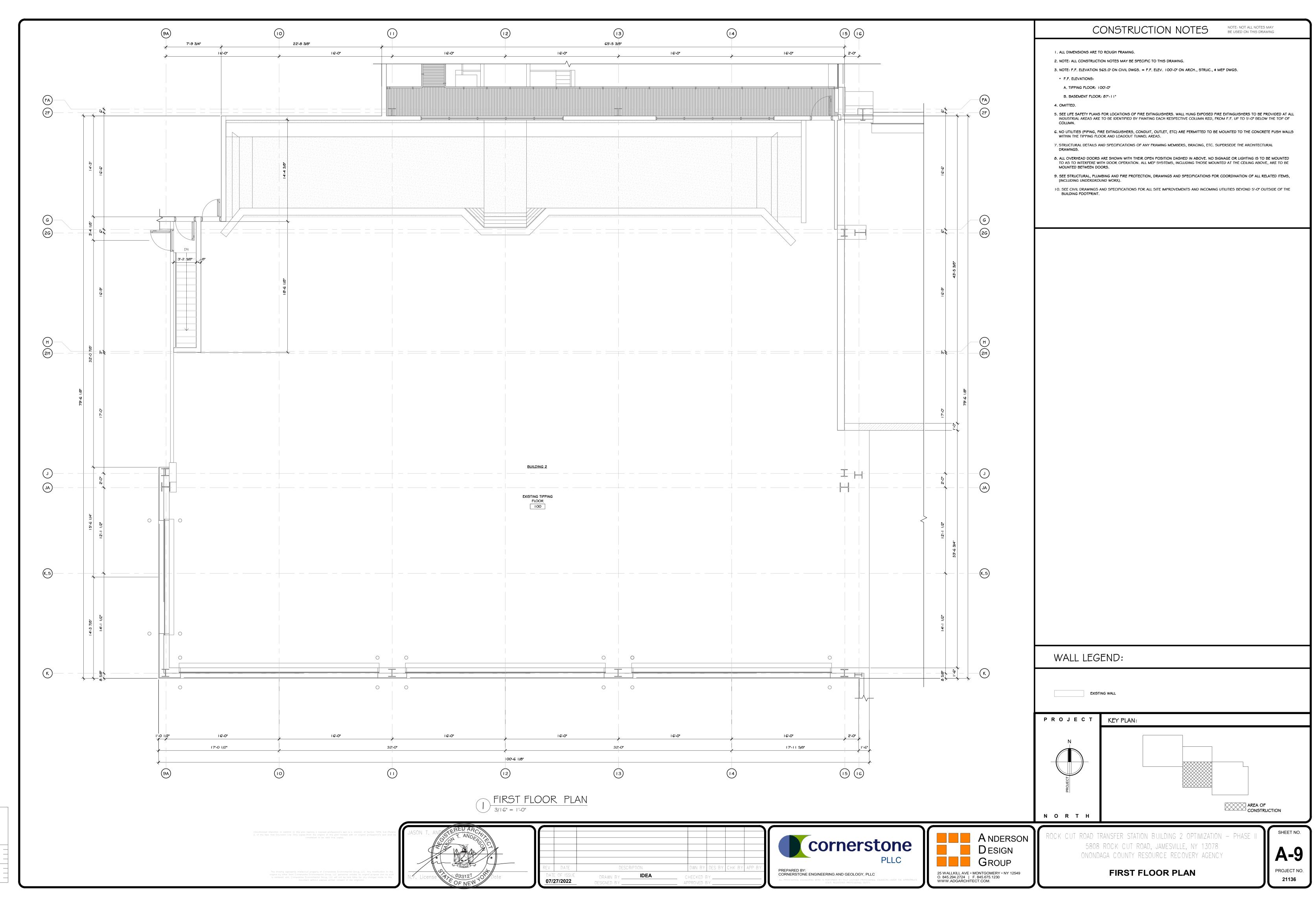












STRUCTURAL STEEL:

- 1. STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
 - ALL WIDE FLANGE (U.N.O.): A992 GRADE 50 (Fy=50) ALL CHANNEL, ANGLE, BASE PLATES, CONNECTION. PLATES (U.N.O.): A36 (Fy=36) STRUCTURAL PIPE: A53 (Fy=35)
 - STRUCTURAL HSS RECTANGULAR TUBE: A500 GRADE B (Fy=46) STRUCTURAL HSS ROUND TUBE: A500 GRADE B (Fy=42)
- ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE A.I.S.C. CODE OF STANDARD PRACTICE, EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
- CONNECTIONS MAY BE BOLTED OR WELDED. THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF CONNECTIONS NOT DESIGNED ON THE DRAWINGS. GENERALLY, CONNECTIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE SCHEMATIC AND ARE ONLY INTENDED TO SHOW THE RELATIONSHIP OF MEMBERS CONNECTED. ANY CONNECTION THAT IS NOT SHOWN OR IS NOT COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF THE PROJECT, RETAINED BY THE FABRICATOR. COMPLETELY DETAILED MEANS THE FOLLOWING INFORMATION IS SHOWN ON THE DETAIL:
 - A. ALL PLATE DIMENSIONS AND GRADES.
 - ALL WELD SIZES, LENGTHS, PITCHES, AND RETURNS.
 - ALL HOLE SIZES AND SPACINGS.
 - NUMBER AND TYPES OF BOLTS: WHERE BOLTS ARE SHOWN BUT NO NUMBER IS GIVEN, THE CONNECTION HAS NOT BEEN COMPLETELY DETAILED.
 - WHERE PARTIAL INFORMATION IS GIVEN, IT SHALL BE THE MINIMUM REQUIREMENT FOR THE CONNECTION. PRIOR TO FABRICATION, PROVIDE (FOR RECORD COPY) DESIGN CALCULATIONS FOR TYPICAL BEAM CONNECTIONS, ALL PRIMARY BRACING AND HANGER CONNECTIONS, SIGNED AND SEALED BY A PROFESSIONAL

ENGINEER REGISTERED IN THE STATE OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER.

- CONNECTION DESIGN FORCES:
 - A. BEAMS, IF REACTION IS NOT SHOWN GREATER OF:

55% OF TOTAL ALLOWABLE UNIFORM LOAD CAPACITY FROM A.I.S.C. 14TH EDITION TABLES FOR ALLOWABLE LOADS ON BEAMS, Wc/L.

10 KIPS.

- MOMENT CONNECTIONS INDICATED ON THE DRAWINGS THUS: ◀H▶— DESIGN FOR MOMENT SHOWN OR, IF NOT SHOWN, DEVELOP MOMENT CAPACITY OF MEMBER WITH fb = 0.66 Fy.
- MAINTAIN TENSION CAPACITY OF COLUMNS, DIAGONALS AND MEMBERS SUBJECT TO TENSION AT BOLT HOLES, NOTCHES, OR COPES.
- D. CONNECTION FORCE NOTATION:

P = AXIAL FORCE IN KIPS: (+) TENSION, (-) COMPRESSION V OR [] = SHEAR IN KIPS

- M = MOMENT IN FOOT KIPS T = TORSION IN FOOT KIPS
- UNLESS OTHERWISE NOTED, THE MINIMUM PLATE THICKNESS SHALL BE 3/8".
- **BOLTED CONNECTIONS:**
- A. MINIMUM BOLT DIAMETER = 3/4"
- SLIP CRITICAL CONNECTIONS OF A325SC OR A490SC BOLTS SHALL BE USED FOR ALL BOLTED CONNECTIONS OF BRACING MEMBERS, MOMENT CONNECTIONS, CANTILEVERS, AND AS SHOWN ON THE DRAWINGS. OVERSIZED AND LONG-SLOTTED HOLES ARE ALLOWED FOR SLIP CRITICAL CONNECTIONS.
- ALL OTHER BOLTED CONNECTIONS SHALL BE BEARING TYPE USING A325N OR A490N BOLTS. OVERSIZED HOLES AND LONG-SLOTTED HOLES ARE NOT ALLOWED UNLESS SHOWN ON THE DRAWINGS.
- A307 BOLTS MAY BE USED WHERE INDICATED ON THE DRAWINGS.
- PROTRUDING BOLT HEADS, SHAFTS OR NUTS SHALL NOT EXTEND INTO NOR PROHIBIT THE APPLICATION OF ARCHITECTURAL FINISHES AND THEY SHALL NOT EXTEND INTO NOR PROHIBIT THE PLACEMENT OF STEEL DECKING TO THE CORRECT LINE AND ELEVATION.
- THE FABRICATOR IS RESPONSIBLE FOR VERIFYING THE TENSION CAPACITY OF AXIALLY LOADED MEMBERS AFTER A SECTION IS REDUCED FOR BOLT HEADS. MEMBER SIZE MAY BE INCREASED OR CONNECTION PLATES
- SHOP DRAWINGS SHALL INDICATE THE TYPE OF BOLT USED IN EACH CONNECTION AND THE ALLOWABLE VALUES USED FOR THE VARIOUS BOLT TYPES.
- WELDED CONNECTIONS:
 - WELDS ARE CONTINUOUS UNLESS NOTED.
 - ALL FILLET WELDS: A.I.S.C. MINIMUM BUT NOT LESS THAN 1/4" UNLESS NOTED OTHERWISE.
 - ALL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT "STRUCTURAL WELDING CODE" (A.W.S. D1.1) PUBLISHED BY THE AMERICAN WELDING SOCIETY. ELECTRODES FOR WELDING SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 4.1.1 OF (A.W.S. D1.1).
- D. ALL GROOVE WELDS SHALL BE COMPLETE PENETRATION UNLESS NOTED OTHERWISE.
- SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- NO CHANGE IN SIZE OR POSITION OF THE STRUCTURAL ELEMENTS SHALL BE MADE AND HOLES, SLOTS, CUTS, ETC., ARE NOT PERMITTED THROUGH ANY MEMBER UNLESS THEY ARE DETAILED ON THE APPROVED SHOP
- NO FINAL BOLTING OR WELDING SHALL BE MADE UNTIL AS MUCH OF THE STRUCTURE AS WILL BE STIFFENED THEREBY HAS BEEN PROPERLY ALIGNED.
- UNLESS NOTED OTHERWISE, BEAMS SHALL BEAR 8" MINIMUM ON CONCRETE OR MASONRY. ANCHOR BEAMS TO MASONRY OR CONCRETE WITH 2-3/4" DIA. ANCHOR BOLTS OR WELDED TO EMBED PLATE.
- FABRICATE ALL BEAMS WITH THE MILL CAMBER UP.
- SHEAR STUDS: CONFORM TO A.W.S. D1.1-98, SHOP WELD EXCEPT WHERE APPLIED THROUGH METAL DECK.
- HEADED STUDS SHALL CONFORM TO A.S.T.M. A108, GRADE 1015, WELDABLE (Fy = 65 K.S.I.).

ARCHITECTURAL DRAWINGS FOR FIREPROOFING REQUIREMENTS AND THICKNESS.

- TOP OF ALL TUBES AND PIPES SHALL HAVE A CAP PLATE 1/4", SEAL WELDED ALL AROUND, UNLESS LARGER CAP PLATE AND / OR WELD IS NOTED. THIS DOES NOT APPLY TO DIAGONAL / SLOPING TUBES OR PIPES.
- WHERE FIREPROOFING IS REQUIRED, ADJUST FIREPROOFING THICKNESS BASED ON MEMBER SIZES. SEE
- ALL EXPOSED EXTERIOR STEEL SHALL HAVE A GALVANIZED FINISH, UNLESS NOTED OTHERWISE.

GENERAL NOTES:

DESIGN CRITERIA:

CODES AND STANDARDS:

2020 NEW YORK BUILDING CODE (N.Y.B.C.)

DESIGN LOADS:

SUPERIMPOSED DEAD LOADS:

ROOFING: 1 P.S.F. INSULATION: 1.5 P.S.F METAL DECK: 2 P.S.F. M.E.P.: 3 P.S.F. SPRINKLER LIVE LOADS: 4.5 P.S.F.

LIVE LOADS:

JOISTS: 3 P.S.F.

TIPPING FLOOR LIVE LOAD: 250 P.S.F. OR HS20 TRUCK

WALKWAYS & STAIRS: 100 P.S.F.

SNOW LOADS:

SNOW LOAD IMPORTANCE FACTOR: I = 1.0 GROUND SNOW LOAD: Pg = 50 P.S.F. FLAT ROOF SNOW LOAD: Pf = 42 P.S.F. SNOW EXPOSURE FACTOR: Ce = 1.0 THERMAL FACTOR: Ct = 1.2

WIND DESIGN DATA:

BASIC WIND SPEED: 115 M.P.H. ULTIMATE, 90 M.P.H. SERVICE PER NYBC BUILDING OCCUPANCY CATEGORY: II WIND EXPOSURE: B INTERNAL PRESSURE COEFFICIENT: +/- 0.18

SEISMIC DESIGN DATA:

SEISMIC IMPORTANCE FACTOR: I = 1.0 MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 0.140 / S1 = 0.061 SITE CLASS: D SPECTRAL RESPONSE COEFFICIENTS: Sds = 0.149 / Sd1 = 0.097 SEISMIC DESIGN CATEGORY: B

POST-INSTALLED ANCHORS

1. ALL POST-INSTALLED ANCHORS AND REBAR SHALL BE INSTALLED PER THE MANUFACTURER'S PRESCRIBED INSTALLATION INSTRUCTIONS.

A. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

B. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

C. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY FERROSCAN, GPR, X-RAY, CHIPPING OR OTHER MEANS.

D. THE CONTRACTOR SHALL RECORD THE ANCHOR EMBEDMENT, AMBIENT TEMPERATURE. TEMPERATURE OF CONCRETE OR MASONRY SUBSTRATE, TEMPERATURE OF THE EPOXY, AND THE SUBSTRATE MOISTURE CONDITIONS AT THE TIME OF ALL ADHESIVE ANCHOR AND ADHESIVE REBAR DOWEL INSTALLATIONS. DO NOT INSTALL ANCHORS IF THE TEMPERATURES ARE OUT OF THE MANUFACTURER'S PRESCRIBED ACCEPTABLE RANGE. DO NOT INSTALL ANCHORS IN WATER-SATURATED CONCRETE OR SUBMERGED CONDITIONS, UNLESS SPECIFICALLY AUTHORIZED TO DO SO BY THE ENGINEER OF RECORD. PREPARE THE ADHESIVE PER THE MANUFACTURER'S INSTRUCTIONS. ALLOW FOR ADEQUATE CURING TIME, PRIOR TO APPLYING LOAD TO THE ANCHORS. THE REQUIRED CURING TIME MAY BE DEPENDENT ON THE SUBSTRATE MOISTURE CONDITIONS. TEMPERATURE AT THE TIME OF INSTALLATION. AND TEMPERATURE DURING THE CURING PROCESS. REFER TO THE MANUFACTURER'S INSTRUCTIONS FOR THE REQUIRED CURING

E. DO NOT DRILL FOR OR INSTALL POST-INSTALLED ANCHORS INTO CONCRETE UNTIL IT HAS CURED FOR A MINIMUM OF 28 DAYS AND HAS REACHED THE REQUIRED DESIGN COMPRESSIVE

F. OVER-HEAD ADHESIVE ANCHORS REQUIRE CONTINUOUS INSPECTIONS, PER THE IBC CODE. ALL OTHER ADHESIVE ANCHOR INSTALLATIONS REQUIRE PERIODIC INSPECTIONS PER THE IBC CODE.

A. <u>A. SPECIAL INSPECTION</u>

- SPECIAL INSPECTION WILL BE IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE (2020
- SPECIAL INSPECTION IS REQUIRED OF MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS.
- COORDINATE SCHEDULES WITH THE AGENCY PERFORMING SPECIAL INSPECTIONS TO ENSURE AMPLE TIME IS AVAILABLE TO PERFORM THE REQUIRED TASKS.
- THE SPECIAL INSPECTOR SHALL PROVIDE REPORTS TO THE LOCAL BUILDING OFFICIAL, REGISTERED DESIGN PROFESSIONAL IN CHARGE, AND THE OWNER'S DESIGNATED REPRESENTATIVE. THESE REPORTS MUST BE IN COMPLIANCE WITH THE 2020 NYSBC. THE SPECIAL INSPECTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTOR IN WRITING OF NON-CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS, <u>2020 NYSBC</u>, OR OTHER VIOLATIONS OF THE APPLICABLE REFERENCED MATERIAL STANDARDS IN THE <u>2020 NYSBC</u> WITHIN THE SCOPE OF THE SPECIAL INSPECTION
- THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT TO THE BUILDING OFFICIAL. REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, AND OWNER'S REPRESENTATIVE STATING WHETHER WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED, REPORTED, AND FOUND TO BE IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS, 2020 NYSBC, AND THE APPLICABLE REFERENCED MATERIAL STANDARDS IN THE 2020 NYSBC. FINAL REPORTS SHALL CATALOG ALL INSPECTION, TESTING, AND RELATED ENGINEER SIGNED REPORTS.

STRUCTURAL OBSERVATION

- STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. THESE OBSERVATIONS DO NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTION AS DEFINED BY SPECIAL INSPECTION.
- THE STRUCTURAL OBSERVER IS NOT INSPECTING FOR OSHA COMPLIANCE AND TEMPORARY CONSTRUCTION, SUCH AS BRACING, SHORING, MEANS AND METHODS, ETC.

COMMENTS:

- PERIODIC SPECIAL INSPECTION: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF WORK. (2020 NYSBC)
- CONTINUOUS SPECIAL INSPECTION: THE FULLTIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE ARE WHERE WORK IS BEING PERFORMED. (2020 NYSBC)
- ITEMS NOT SHOWN MAY REQUIRE CONTINUOUS OR PERIODIC SPECIAL STRUCTURAL INSPECTION AT THE DISCRETION OF THE PROJECT MANAGER. ITEMS LISTED MAY REQUIRE ALTERNATE FREQUENCIES OF INSPECTION OTHER THAN SHOWN.
- WELDING OF REINFORCING STEEL IS NOT ACCEPTABLE UNLESS DIRECTED BY THE ENGINEER OF RECORD.

SPECIAL INSPECTION:

THE FOLLOWING STRUCTURAL ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER 2020 NYSBC SECTION 1704. OWNER TO FURNISH INSPECTION UNLESS INSTRUCTED OTHERWISE BY THE CONSTRUCTION CONTRACT.

- SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A COUNTY INSPECTOR. SPECIALLY INSPECTED WORK WHICH IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE COUNTY INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.
- THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE COUNTY TO PERFORM THE TYPES OF INSPECTION SPECIFIED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION. ANY WORK PERFORMED WITHOUT REQUIRED SPECIAL INSPECTION IS SUBJECT TO REMOVAL.
- 4. SUBMIT WRITTEN REPORTS WITHIN TWO DAYS OF TESTING TO ARCHITECT, ENGINEER OF RECORD AND **BUILDING OFFICIAL.**

MINIMUM QUALIFICATIONS FOR SPECIAL INSPECTORS				
WELDING	1.	CURRENT AWS CERTIFIED WELDING INSPECTOR.		
	2.	CURRENT ICC STRUCTURAL STEEL AND WELDING CERTIFICATE PLUS ONE YEAR OF RELEVANT EXPERIENCE.		
	3.	CURRENT LEVEL II CERTIFICATION FROM THE AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (NDT).		
	4.	CURRENT NDT LEVEL III PROVIDED PREVIOUSLY CERTIFIED AS NDT LEVEL II.		
HIGH-STRENGTH BOLTING & STEEL FRAME INSPECTION	1.	CURRENT ICC STRUCTURAL STEEL AND WELDING CERTIFICATION AND ONE YEAR OF RELEVANT EXPERIENCE.		
	2.	EIT WITH RELEVANT EXPERIENCE.		
	3.	P.E. WITH RELEVANT EXPERIENCE.		
INSPECTION OF FABRICATORS	1.	BAR JOIST: SEE WELDING REQUIREMENTS.		
	2.	STRUCTURAL STEEL: SEE WELDING REQUIREMENTS		
SMOKE CONTROL	1.	THE RDP RESPONSIBLE FOR DESIGN.		
SEISMIC RESISTANCE	1.	SEE THE APPLICABLE CATEGORIES IN THIS TABLE.		

		CONTINUOUS	PERIODIO
1.	MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:		
	a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		Х
	b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		X
2.	INSPECTION OF HIGH-2. STRENGTH BOLTING:		
	a. BEARING-TYPE CONNECTIONS. (SNUG TIGHT JOINTS)		X
	b. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.		Х
	c. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	
3.	MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD - FORMED DECK		
	a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		Х
	b. MANUFACTURERS' CERTIFIED MILL TEST REPORTS.		Х
4.	MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		
	a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.		Х
	b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		Х
5.	INSPECTION OF WELDING:		
	a. STRUCTURAL STEEL AND COLD - FORMED STEEL DECK		
	1.) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.	Х	
	2.) MULTI-PASS FILLET WELDS.	Х	
	3.) SINGLE-PASS FILLET WELDS > 5/16"	Х	
	4.) SINGLE-PASS FILLET WELDS ≤ 5/16"		Х
	5.) FLOOR AND ROOF DECK WELDS.		Х
	6.) WELDED STUDS WHEN USED FOR STRUCTURAL DIAPHRAGM.		Х
	7.) WELDED SHEET STEEL FOR COLD-FORMED STEEL MEMBERS.		Х
	8.) WELDING OF STAIRS AND RAILING SYSTEM.		Х
	b. REINFORCING STEEL:		
	1.) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.		Х
	2.) REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT.	х	
	3.) SHEAR REINFORCEMENT.	х	
	4.) OTHER REINFORCING STEEL.		Х
6.	INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:		
	a. DETAILS SUCH AS BRACING AND STIFFENING.		Х
	b. MEMBER LOCATIONS.		Х
	c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.		Х
7.	INSPECTION OF FABRICATORS: REVIEW PLANT OPERATIONS AND QUALITY CONTROL PROCEDURES.		
8.	INSPECTION OF FLOOR AND ROOF DECK ATTACHMENT.		Х
9.	INSPECTION OF STEEL JOIST AND JOIST GIRDER INSTALLATION AND ATTACHMENT TO SUPPORTS, INCLUDING BRIDGING AND ACCESSORIES.		Х
10.	COMPLIANCE WITH CONSTRUCTION DOCUMENTS AND APPROVED SUBMITTALS SHALL BE VERIFIED WITH SETS USED IN THE FIELD.		
	INSPECTION OF FLOOR AND ROOF DECK ATTACHMENT.		
11.	THE TESTING SHALL BE AS REQUIRED BY AISC 341.	-	-
12.	BASE METAL THICKER THAN 1.5 INCHES (38 MM), WHERE SUBJECT TO THROUGH-THICKNESS WELD SHRINKAGE STRAINS, SHALL BE ULTRASONICALLY TESTED FOR DISCONTINUITIES BEHIND AND ADJACENT TO SUCH WELDS AFTER JOINT COMPLETION.	-	-
13.	THE ACCEPTANCE CRITERIA FOR NONDESTRUCTIVE TESTING SHALL BE AS REQUIRED IN AWS D1.1 AS SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL. ANY MATERIAL DISCONTINUITIES SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF ASTM A 435 OR ASTM A 898 (LEVEL 1 CRITERIA) AND CRITERIA AS ESTABLISHED BY THE REGISTERED DESIGN PROFESSIONAL(S) IN RESPONSIBLE CHARGE AND THE CONSTRUCTION DOCUMENTS.		

STRUCTURAL STEEL INSPECTIONS AND VERIFICATION

(TABLE 1704.3)

FREQUENCY

CONTINUOUS PERIODIC



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VINCENT A. GRIFFIN, P.E.

DESCRIPTION DWN BY DES BY CHK BY APF V.A.G. CHECKED BY _ M.E. V.A.G. DESIGNED BY APPROVED BY _





ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION - PHASE II

CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL

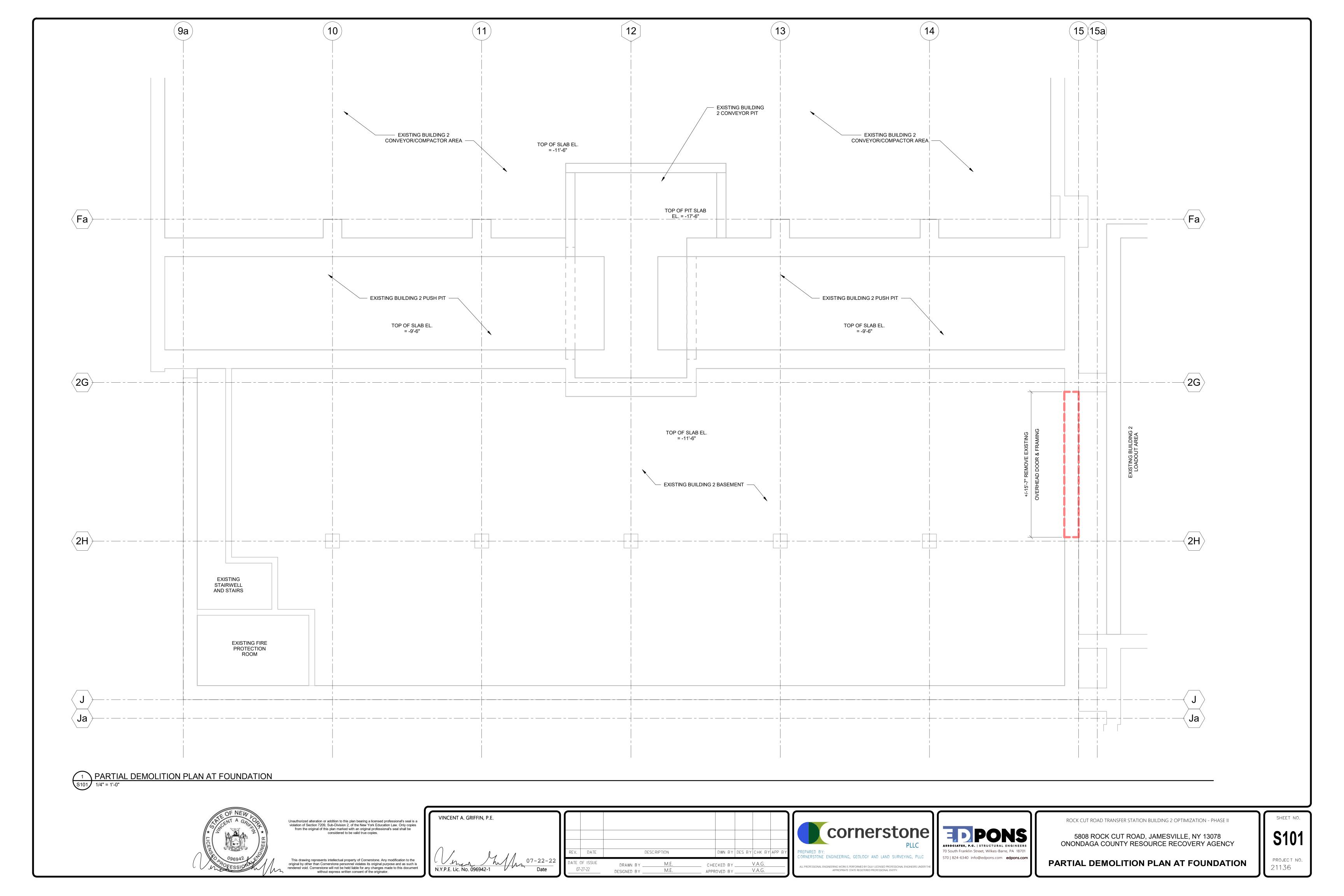
WELDING IN ACCORDANCE WITH AISC 341

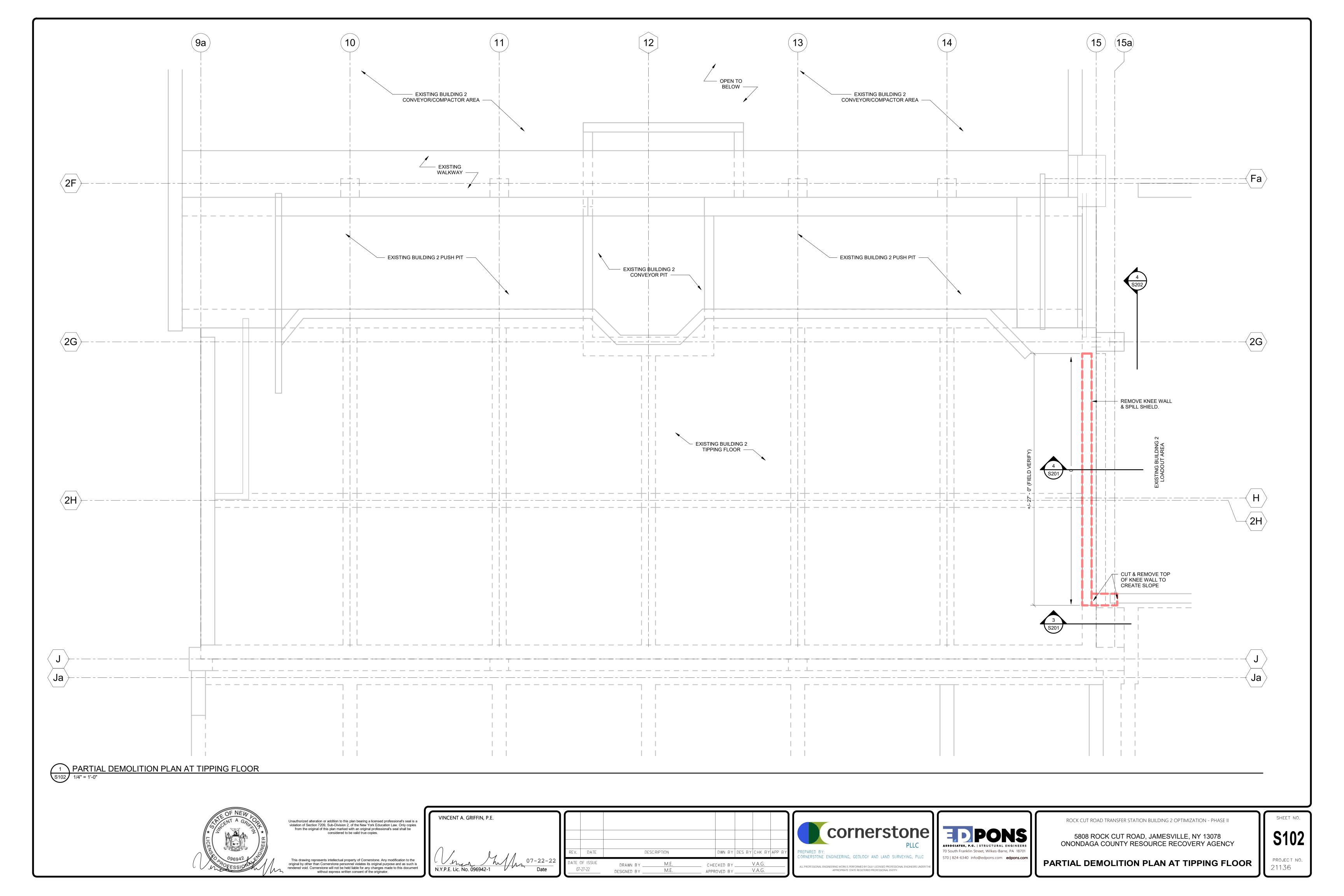
5808 ROCK CUT ROAD, JAMESVILLE, NY 13078 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

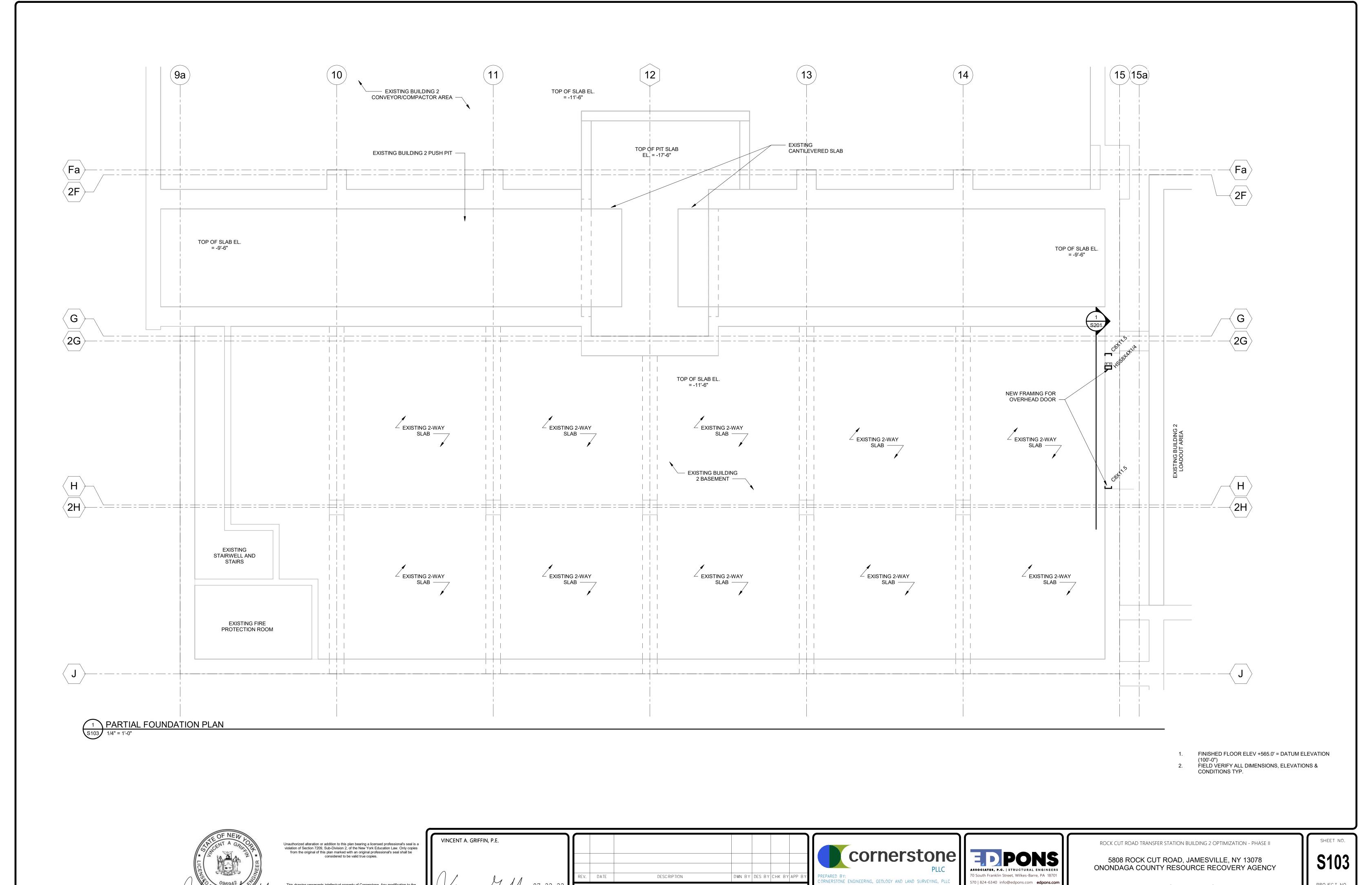
STRUCTURAL NOTES & SPECIAL INSPECTIONS

SHEET NO.

PROJECT NO. 21136







CHECKED BY ____

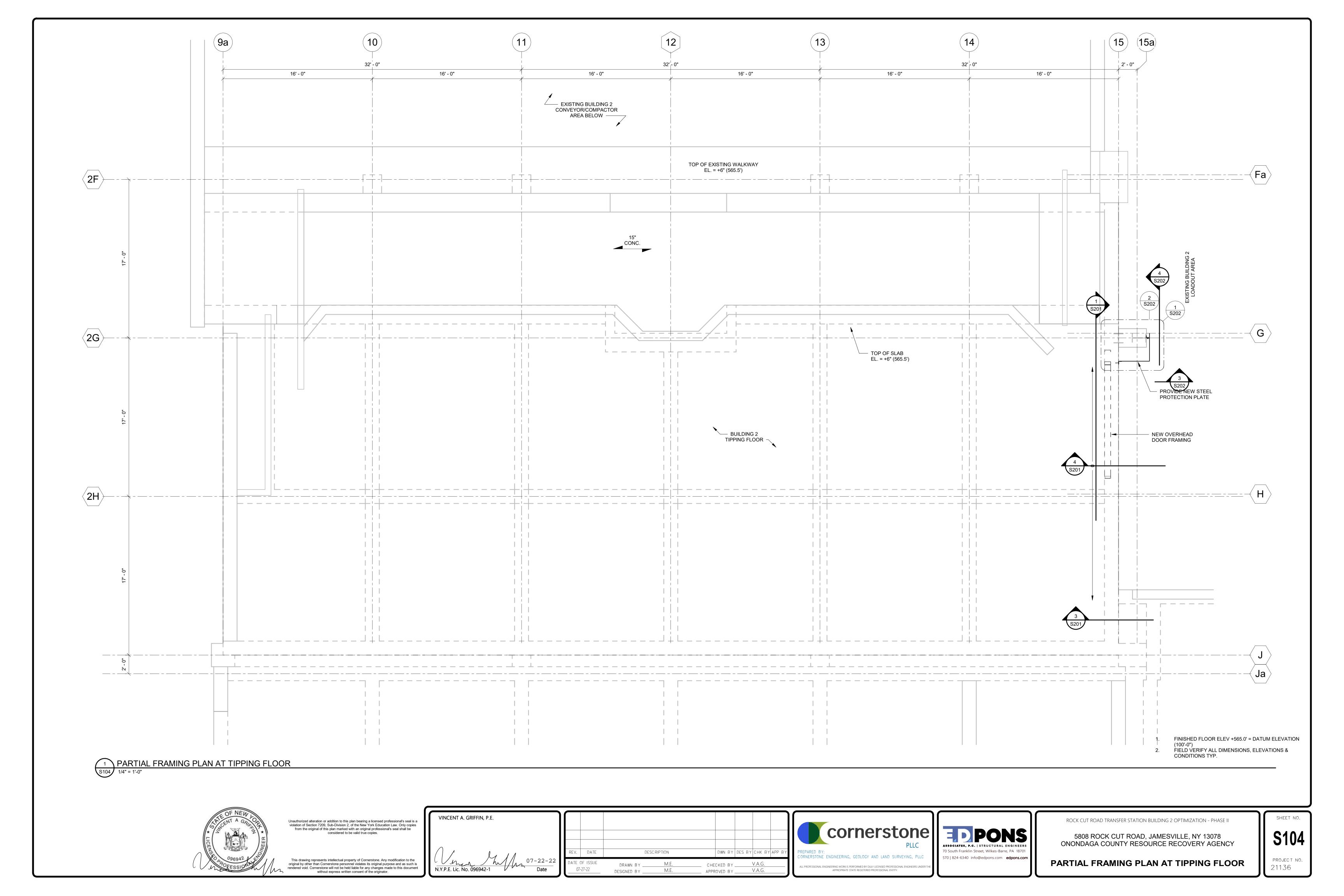
APPROVED BY ____

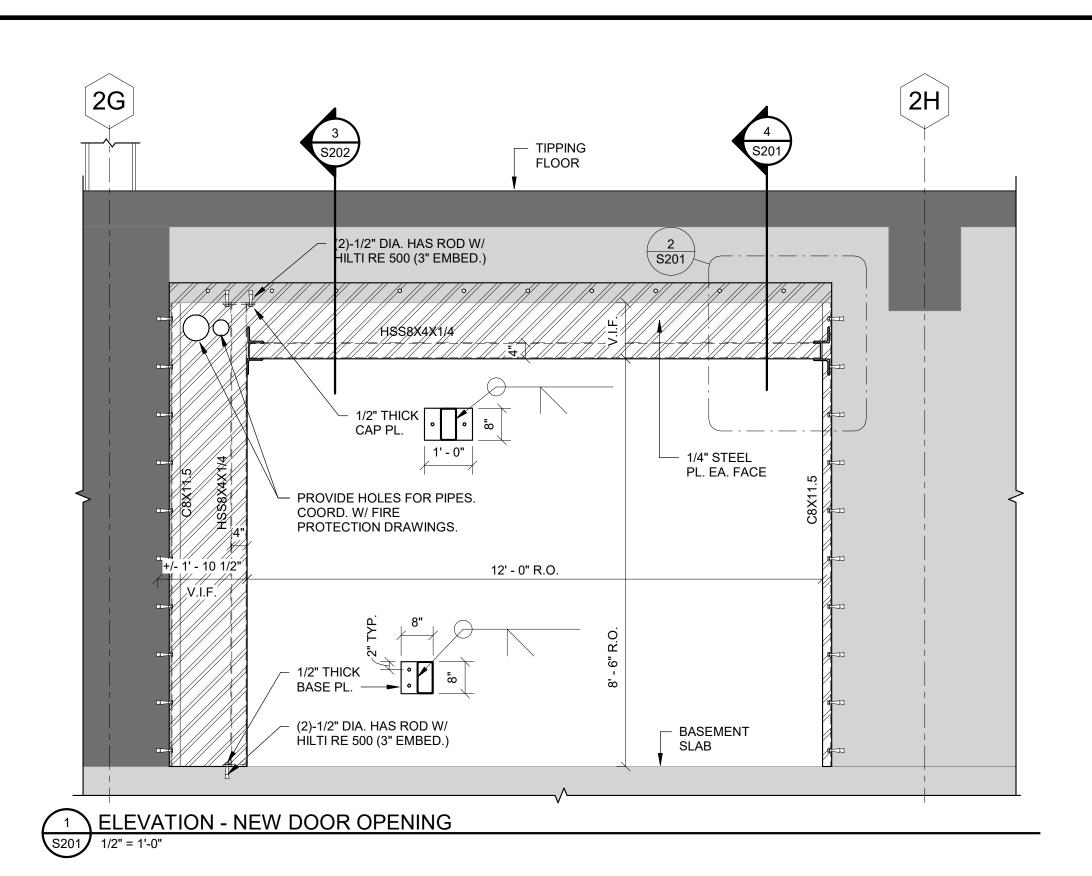
DESIGNED BY ____

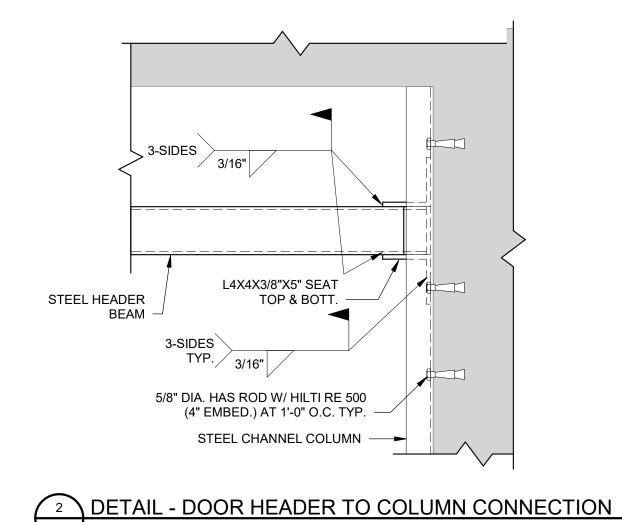
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PARTIAL FOUNDATION PLAN

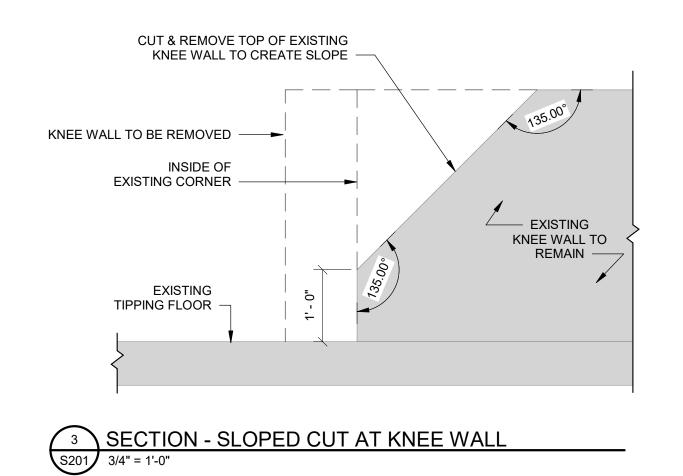
PROJECT NO.
21136

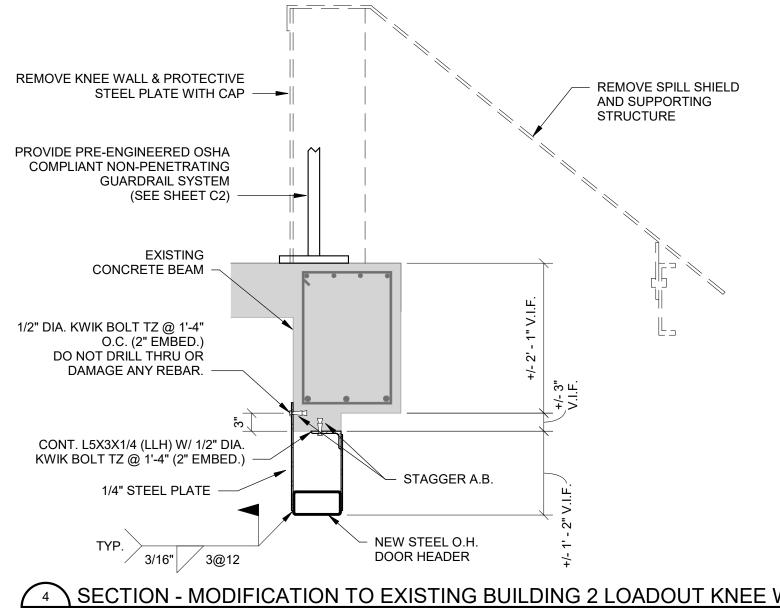






S201 1 1/2" = 1'-0"



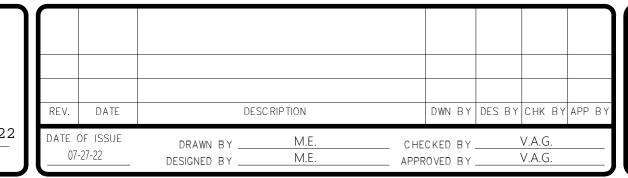


SECTION - MODIFICATION TO EXISTING BUILDING 2 LOADOUT KNEE WALL
3/4" = 1'-0"

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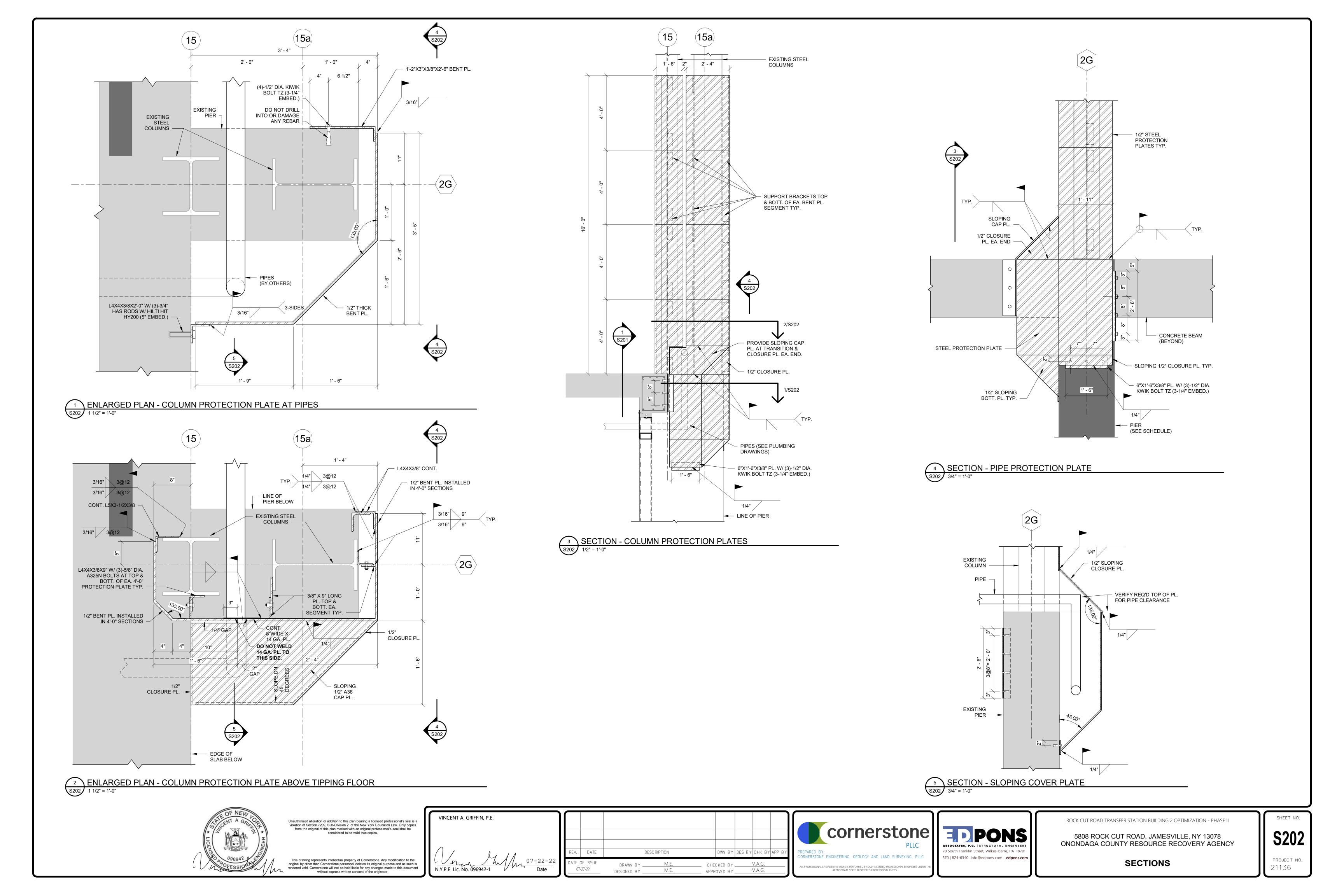
ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION - PHASE II

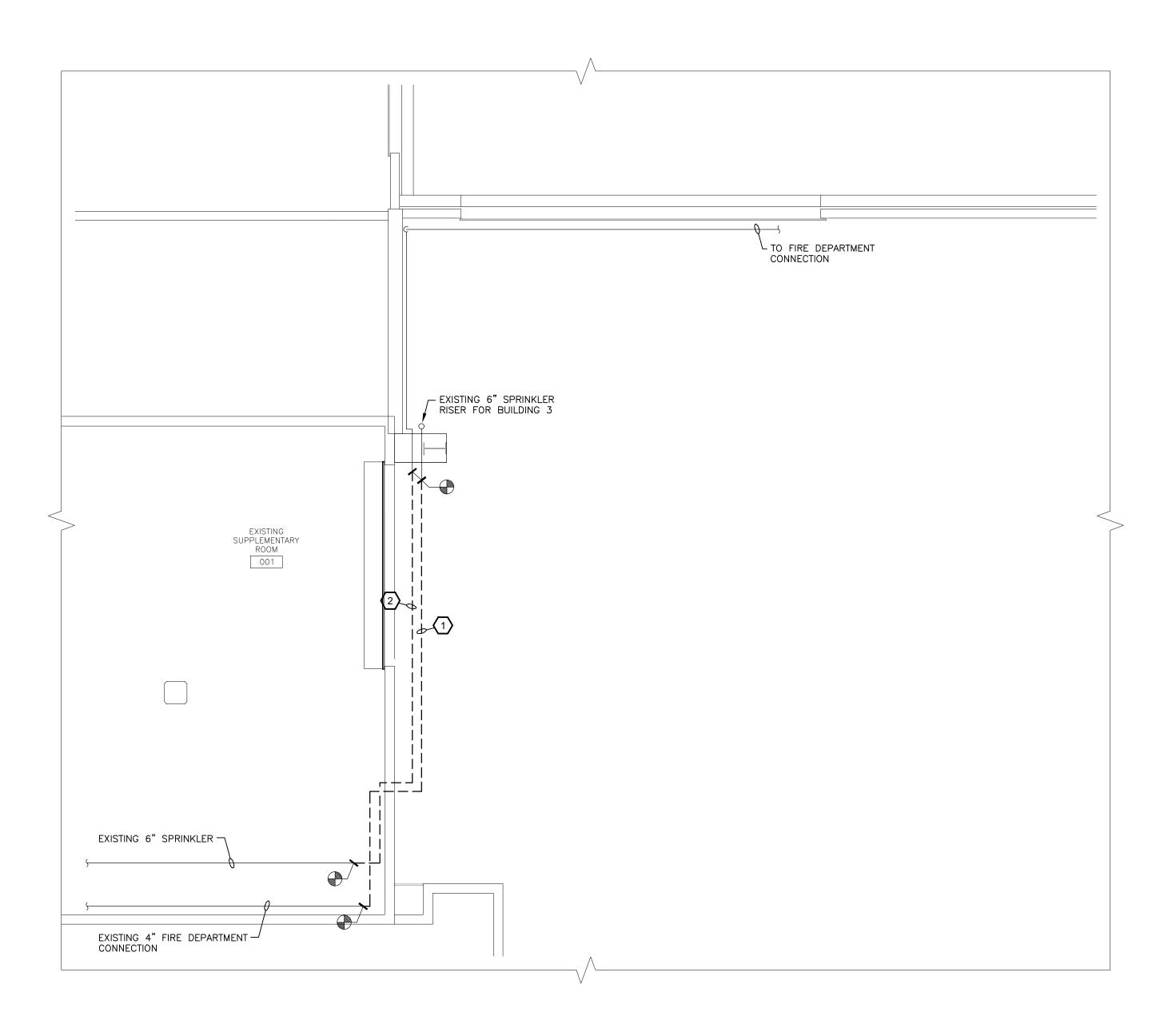
5808 ROCK CUT ROAD, JAMESVILLE, NY 13078 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

SECTIONS

PROJECT NO. 21136

SHEET NO.





FIRE PROTECTION: BASEMENT DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

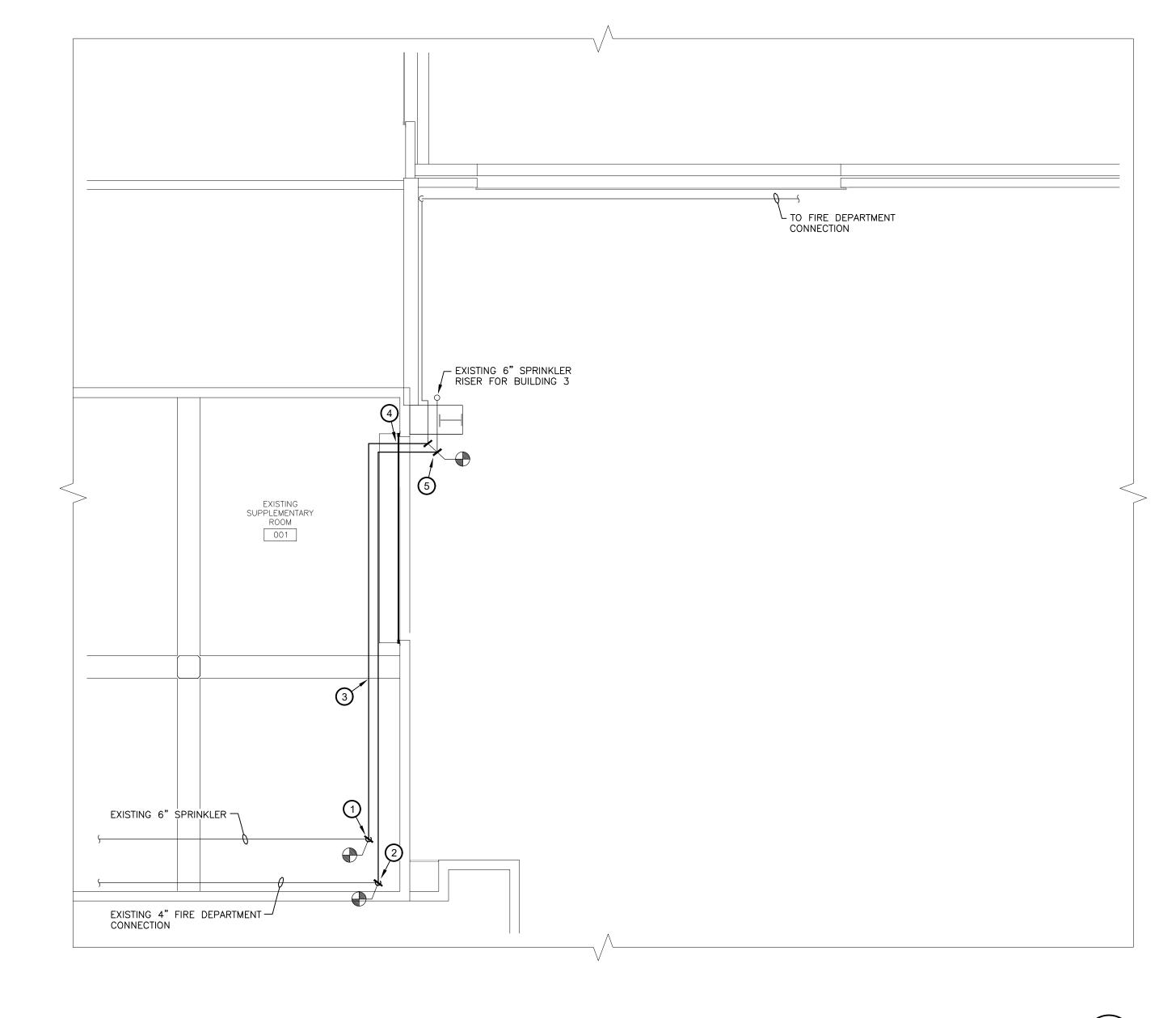
KEYED DEMOLITION NOTES (APPLIES TO 1/FP1 ONLY)

6" SPRINKLER MAIN TO BE REMOVED

4" FIRE DEPARTMENT CONNECTION TO BE REMOVED

SYMBOLS

CONNECTION/DISCONNECTION POINT



FIRE PROTECTION: BASEMENT FLOOR PLAN

SCALE: 3/16" = 1'-0"

KEYED NOTES

(APPLIES TO 2/FP1 ONLY)

PROVIDE NEW VERTICAL CONNECTION AT EXISTING 6" SPRINKLER.

PROVIDE NEW VERTICAL CONNECTION AT EXISTING 4" FIRE DEPARTMENT CONNECTION.

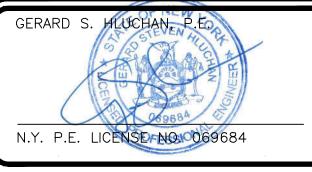
NEW PIPING TO BE INSTALLED TIGHT TO UNDERSIDE OF CONCRETE BEAM.

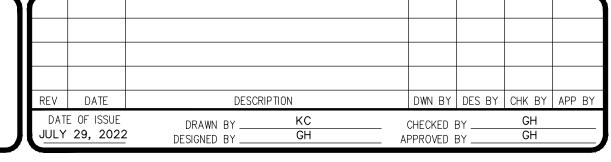
NEW PIPING TO BE INSTALLED TIGHT TO UNDERSIDE OF CONCRETE HEADER ABOVE DOOR FRAME. COORDINATE EXACT LOCATION AND CONFIGURATION OF PIPING WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.

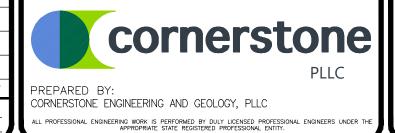
5 RECONNECT TO EXISTING 6" AND 4" PIPES.

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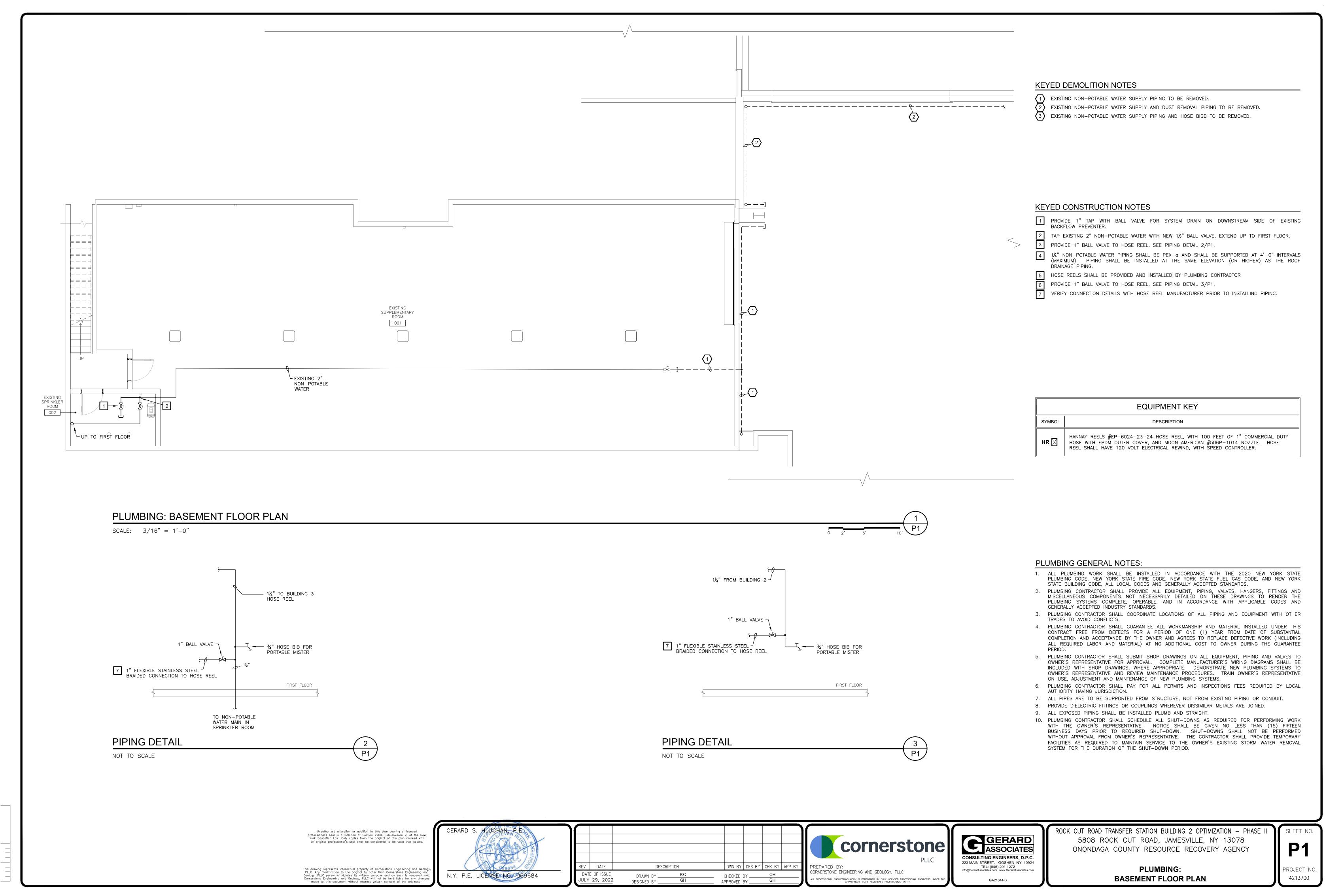


ROCK CUT ROAD TRANSFER STATION BUILDING 2 OPTIMIZATION – PHASE II 5808 ROCK CUT ROAD, JAMESVILLE, NY 13078 ONONDAGA COUNTY RESOURCE RECOVERY AGENCY

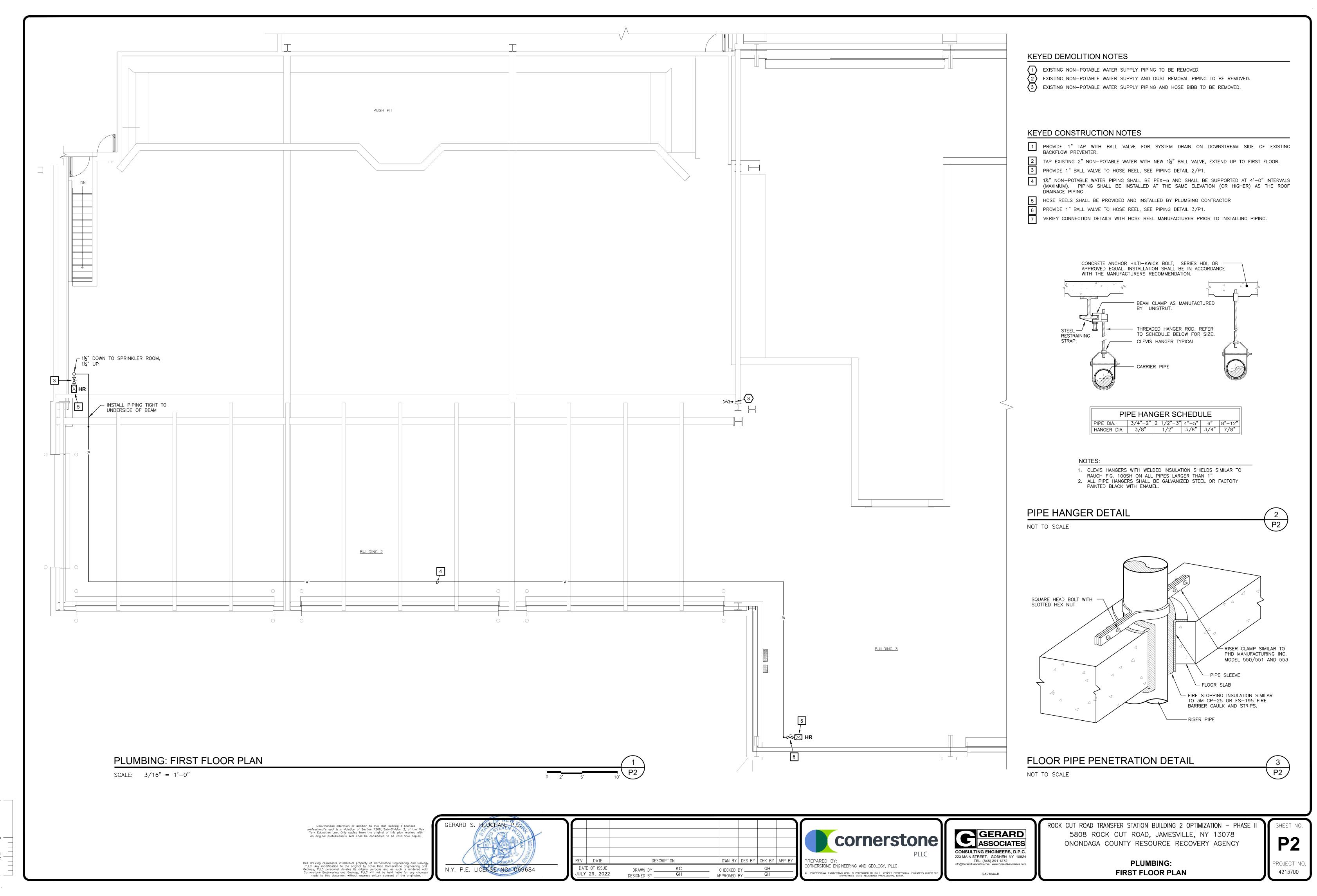
FIRE PROTECTION: BASEMENT FLOOR PLANS SHEET NO.

FP1

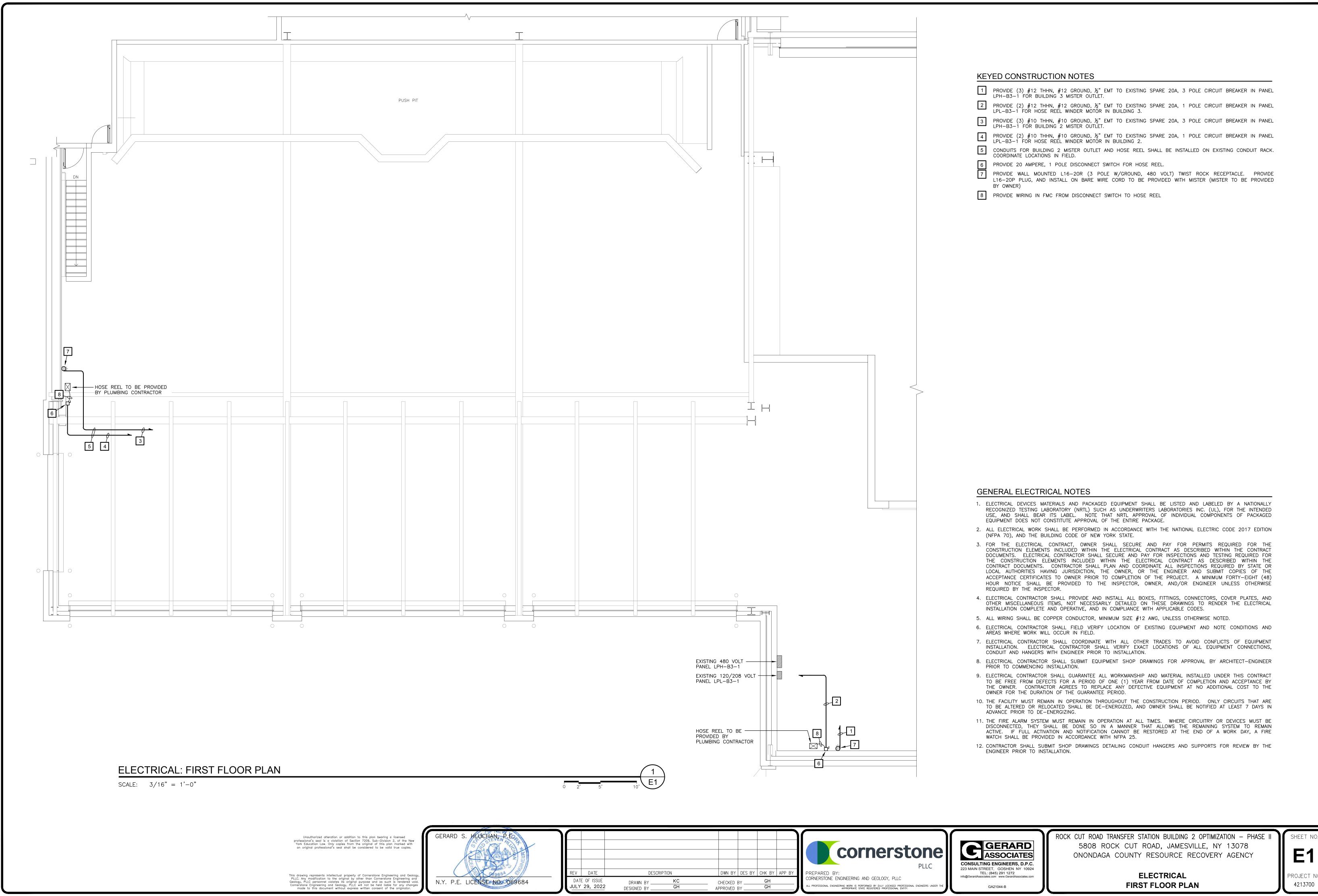
PROJECT NO.
4213700



1" 1/2" 0"



1" 1/2" ()"



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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By









Endorsed By





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American Council of Engineering Companies 1015 15th Street N.W., Washington, DC 20005 (202) 347-7474

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

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

10. Claim

 a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

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

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

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

- 43. Successful Bidder—The Bidder to which the Owner makes an award of contract.
- 44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
- 45. Supplier—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. Technical Data

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

1.02 *Terminology*

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. Intent of Certain Terms or Adjectives: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. Day: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. Furnish, Install, Perform, Provide

- 1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
- 2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
- 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
- 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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

ARTICLE 2—PRELIMINARY MATTERS

2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance

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

2.02 Copies of Documents

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

2.03 Before Starting Construction

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

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

2.04 Preconstruction Conference; Designation of Authorized Representatives

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

2.05 Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 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.
 - Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 Electronic Transmittals

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

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

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

3.02 Reference Standards

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

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

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

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

B. Resolving Discrepancies

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

3.04 Requirements of the Contract Documents

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

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

3.05 Reuse of Documents

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

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

- 4.01 Commencement of Contract Times; Notice to Proceed
 - A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 120th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 Starting the Work

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

4.03 Reference Points

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

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

4.04 Progress Schedule

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

4.05 Delays in Contractor's Progress

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

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
 - 1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 - Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 - 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
 - 1. The circumstances that form the basis for the requested adjustment;
 - 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 - 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 - 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 - 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

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

5.01 Availability of Lands

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

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

5.02 Use of Site and Other Areas

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

- and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. Loading of Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 Subsurface and Physical Conditions

- A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
 - 2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
 - 3. Technical Data contained in such reports and drawings.
- B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. Reliance by Contractor on Technical Data: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. Limitations of Other Data and Documents: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 - 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 - 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 Differing Subsurface or Physical Conditions

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

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

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

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

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

5.05 Underground Facilities

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

- 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
- 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
- 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. Notice by Contractor: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. Engineer's Review: Engineer will:
 - 1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 - identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 - obtain any pertinent cost or schedule information from Contractor; determine the extent,
 if any, to which a change is required in the Drawings or Specifications to reflect and
 document the consequences of the existence or location of the Underground Facility; and
 - 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
 - During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. Owner's Statement to Contractor Regarding Underground Facility: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. Early Resumption of Work: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. Possible Price and Times Adjustments
 - Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract
 Times, to the extent that any existing Underground Facility at the Site that was not shown

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

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

5.06 Hazardous Environmental Conditions at Site

- A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
 - 2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 - 3. Technical Data contained in such reports and drawings.
- B. Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

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

- conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

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

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

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

6.02 Insurance—General Provisions

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

- Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

- Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
- 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

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

6.03 Contractor's Insurance

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

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

6.04 Builder's Risk and Other Property Insurance

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

6.05 Property Losses; Subrogation

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

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

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

6.06 Receipt and Application of Property Insurance Proceeds

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

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 Contractor's Means and Methods of Construction

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

7.02 Supervision and Superintendence

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

7.03 Labor; Working Hours

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

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

7.04 Services, Materials, and Equipment

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

7.05 *"Or Equals"*

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

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

7.06 Substitutes

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

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

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

7.07 Concerning Subcontractors and Suppliers

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

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

7.08 Patent Fees and Royalties

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

7.09 Permits

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

7.10 *Taxes*

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

7.11 Laws and Regulations

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

7.12 Record Documents

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

7.13 Safety and Protection

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

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

7.14 Hazard Communication Programs

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

7.15 *Emergencies*

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

7.16 Submittals

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

- 3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. Submittal Procedures for Shop Drawings and Samples: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. Shop Drawings

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. Samples

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
- 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. Engineer's Review of Shop Drawings and Samples
 - Engineer will provide timely review of Shop Drawings and Samples in accordance with the
 accepted Schedule of Submittals. Engineer's review and approval will be only to
 determine if the items covered by the Submittals will, after installation or incorporation
 in the Work, comply with the requirements of the Contract Documents, and be
 compatible with the design concept of the completed Project as a functioning whole as
 indicated by the Contract Documents.
 - 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 - 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 - 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

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

D. Resubmittal Procedures for Shop Drawings and Samples

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

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

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

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

7.17 Contractor's General Warranty and Guarantee

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

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

7.18 *Indemnification*

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

7.19 Delegation of Professional Design Services

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

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

ARTICLE 8—OTHER WORK AT THE SITE

8.01 Other Work

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

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

8.02 *Coordination*

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

8.03 Legal Relationships

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

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

ARTICLE 9—OWNER'S RESPONSIBILITIES

- 9.01 Communications to Contractor
 - A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.
- 9.02 Replacement of Engineer
 - A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.
- 9.03 Furnish Data
 - A. Owner shall promptly furnish the data required of Owner under the Contract Documents.
- 9.04 Pav When Due
 - A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

- 9.05 Lands and Easements; Reports, Tests, and Drawings
 - A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 Insurance

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 Change Orders

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 Inspections, Tests, and Approvals

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 Limitations on Owner's Responsibilities

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 Evidence of Financial Arrangements

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 Safety Programs

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 Owner's Representative

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

10.02 Visits to Site

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

10.03 Resident Project Representative

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

10.04 Engineer's Authority

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

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

10.05 Determinations for Unit Price Work

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

10.06 Decisions on Requirements of Contract Documents and Acceptability of Work

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

10.07 Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 Compliance with Safety Program

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

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 Amending and Supplementing the Contract

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

11.02 Change Orders

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

11.03 Work Change Directives

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

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

11.04 Field Orders

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

11.05 Owner-Authorized Changes in the Work

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

11.06 Unauthorized Changes in the Work

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

11.07 Change of Contract Price

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

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

11.08 Change of Contract Times

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

11.09 Change Proposals

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

B. Change Proposal Procedures

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

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

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

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

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

11.10 Notification to Surety

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

ARTICLE 12—CLAIMS

12.01 *Claims*

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

- and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. Review and Resolution: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. Mediation

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

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

13.01 Cost of the Work

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

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

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

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

c. Construction Equipment Rental

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. Costs Excluded: The term Cost of the Work does not include any of the following items:
 - 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. Contractor's Fee

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

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

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

13.02 Allowances

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

13.03 Unit Price Work

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

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

E. Adjustments in Unit Price

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

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

14.01 Access to Work

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

14.02 Tests, Inspections, and Approvals

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

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

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

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

14.03 Defective Work

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

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

14.04 Acceptance of Defective Work

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

14.05 Uncovering Work

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

14.06 Owner May Stop the Work

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

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

14.07 Owner May Correct Defective Work

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

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

15.01 Progress Payments

A. Basis for Progress Payments: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. Applications for Payments

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

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

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

C. Review of Applications

- 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;
 - the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
- 3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

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

D. Payment Becomes Due

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

E. Reductions in Payment by Owner

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

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

15.02 Contractor's Warranty of Title

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

15.03 Substantial Completion

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

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

15.04 Partial Use or Occupancy

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

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

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

15.05 Final Inspection

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

15.06 Final Payment

A. Application for Payment

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

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

15.07 Waiver of Claims

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

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

15.08 Correction Period

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

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

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

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

16.02 Owner May Terminate for Cause

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

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

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

16.03 Owner May Terminate for Convenience

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

16.04 Contractor May Stop Work or Terminate

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

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

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

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

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice

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

18.02 Computation of Times

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

18.03 Cumulative Remedies

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

18.04 Limitation of Damages

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

18.05 No Waiver

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

18.06 Survival of Obligations

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

18.07 Controlling Law

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

18.08 Assignment of Contract

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

18.09 Successors and Assigns

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

18.10 Headings

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

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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

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

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

SC-1.01 Modify existing definitions as follows:

- 12. Replace the phrase "concerning the Work" in Paragraph 1.01.A.11 with the phrase "portions of Work assigned to the specific Contractor".
- 14. Replace the phrase "completion of the Work" in Paragraph 1.01.A.13 with the phrase "completion of the portions of the Work assigned to the specific Contractor".
- 16. Replace Paragraph 1.01.A.15 in its entirety with the following:

Contractor – All individuals or entities with whom the Owner has entered into an Agreement for portions of Work described in the Contract Documents. Work not assigned to a specific Contractor shall be the responsibility of all Contractors.

SC-1.01 Add the following definitions immediately following Subparagraph 1.01.A.50:

- 51. General Contractor –The individual or entity with whom Owner has entered into an Agreement to perform the portions of the Work assigned in the Contract Documents to the General Contractor.
- 52. Electrical Contractor –The individual or entity with whom Owner has entered into an Agreement to perform the portions of the Work assigned in the Contract Documents to the Electrical Contractor.
- 53. Plumbing and Fire Suppression Contractor –The individual or entity with whom Owner has entered into an Agreement to perform the portions of the Work assigned in the Contract Documents to the Plumbing and Fire Suppression Contractor.

ARTICLE 2—PRELIMINARY MATTERS

2.02 Copies of Documents

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

Owner shall furnish to Contractor up to one printed copy of the Contract Documents (including one fully signed counterpart of the Agreement) upon request, and one copy in electronic portable document format (PDF).

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

SC-3.01 Add the following new paragraph immediately after Paragraph 3.01.G:

D. Contractor Documents are written in the imperative mood. When direction is given, it shall be understood that the direction is given to Contractor. For example, the phrase "Provide two pumps" shall be understood to mean "Contractor shall provide two pumps."

SC-3.03 Reporting and Resolving Discrepancies

SC-3.03 Add the following new paragraph immediately after Paragraph 3.03.B.1.b:

- 2. In determining Contract Price with respect to a conflict, error, or discrepancy within the Contract Documents, the Contract Documents shall be given precedence in the following order with Change Orders being the highest precedence:
 - 1. Change Orders
 - 2. Work Change Directives
 - 3. Field Orders
 - 4. Agreement
 - 5. Addenda
 - 6. Laws and Regulations
 - 7. Supplementary Conditions
 - 8. General Conditions
 - 9. Drawings
 - 10. Specifications

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

No Supplementary Conditions in this Article.

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

5.03 Subsurface and Physical Conditions

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

E. In the preparation of Drawings and Specifications, Engineer relied upon the following drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site. None of the contents of such reports constitutes "technical data" on which the Contractor may rely. Information contained in drawings of existing physical conditions does not eliminate the need for the Contractor to conduct additional investigations in the field.

Drawings Title	Date of Drawings	Technical Data
OCRRA Rock Cut Road Transfer	January 2019	Drawings G-001 through L-007
Station Modifications		

- G. Contractor may examine copies of reports and drawings identified in SC-5.03.E that were not included with the Bidding Documents at Onondaga County Resource Recovery Agency (100 Elwood Davis Road, Syracuse NY) during regular business hours, or may request copies from Engineer.
- 5.06 Hazardous Environmental Conditions
- SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:
 - 4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
NO HAZARDOUS	N/A	N/A
CONDITIONS/REPORTS ARE KNOWN		

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
NO HAZARDOUS	N/A	N/A
CONDITIONS/DRAWINGS ARE		
KNOWN		

ARTICLE 6—BONDS AND INSURANCE

- 6.01 Performance, Payment, and Other Bonds
- SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:
 - 1. Required Performance Bond Form: The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).
- 6.03 Contractor's Insurance
- SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:
- D. See Certificate of Insurance requirements provided in the Agreement.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- A. 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 documents for tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 - 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 8—OTHER WORK AT THE SITE

SC-8.04 Claims Between Contractors

SC-8.04 Add the following new paragraph immediately after Paragraph

8.03: SC-8.04 Claims Between Contractors

- A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, or Engineer, then Contractor (without involving Owner or Engineer) shall either (1) remedy the damage, (2) agree to compensate the other contractor for remedy of the damage, or (3) remedy the damage and attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law.
- B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner or Engineer consultants, to the extent said claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner or Engineer on account of any such damage or Claim.
- C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 12. An extension of the

Contract Times shall be Contractor's exclusive remedy with respect to Owner and Engineer for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner or Engineer for activities that are their respective responsibilities.

ARTICLE 9—OWNER'S RESPONSIBILITIES

SC-9.09 Limitations on Owner's Responsibilities

Add the following paragraph immediately after Paragraph 9.09.A of the General Conditions:

- B. Owner will let other direct Contracts and will have authority and responsibility for coordination of the various contractors.
- SC-9.11 Add the following new paragraph immediately after Paragraph 9.11.A:
 - B. On request of Contractor prior to execution of any Change Order involving a significant increase in Contract Price, Owner shall furnish to Contractor reasonable evidence that adequate financial arrangements have been made by Owner to enable Owner to fulfill the increased financial obligations to be undertaken by Owner as a result of such Change Order.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

- 10.03 Resident Project Representative
- SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:
 - C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 - Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 - Safety Compliance: Comply with Site safety programs, as they apply to RPR, and if
 required to do so by such safety programs, receive safety training specifically related to
 RPR's own personal safety while at the Site.
 - 3. 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 Contractor's proper execution of the Work.

4. Review of Work; Defective Work

- a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
- b. Observe whether any Work in place appears to be defective.
- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. Inspections and Tests

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 6. Payment Requests: Review Applications for Payment with Contractor.

7. Completion

- a. Participate in Engineer's visits regarding Substantial Completion.
- b. Assist in the preparation of a punch list of items to be completed or corrected.
- c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will 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 construction.
- 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. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

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

- 13.01 *Cost of the Work*
- SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of Rental Rate Blue Book for Construction Equipment.

- SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:
 - a. For purposes of this paragraph, "small tools and hand tools" means any tool or equipment whose current price if it were purchased new at retail would be less than \$500.

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

No suggested Supplementary Conditions in this Article.

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

15.01 *Progress Payments*

SC-15.01.A Add the following to the end of Subparagraph 15.01.A of the General Conditions:

By signing the Application and Certificate for Payment, Contractor certifies that all items, units, quantities, and prices of Work and material in the estimate are correct, that all claimed Work has been performed and materials supplied in full accordance with the Contract, and that Contractor has no claims for damages, losses or expense against Owner for compensation in addition to that provided for in the application except such claims for change of Contract Price as Contractor has filed with Engineer and Owner in writing (in accordance with Article 10) prior to the date of his certifying the application.

SC-15.01.C.6 Add the following subparagraph after subparagraph 15.01.C.6.e of the General Conditions:

f. or because of Contractor's failure to submit certifications, affidavits, schedules, or other written information when and as required in the Contract Documents, or Contractor's failure to make submittals in accordance with the Schedule of Submittals.

15.03 Substantial Completion

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

 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 reinspection or re-testing, including the cost of time, travel and living expenses, will 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 this Article 15.

15.06 Final Payment

SC-15.06.A Add the following subparagraph immediately after Paragraph 15.06.A.3:

4. By signing the application and certificate for Final Payment, Contractor certifies that the total cost of the Work and the amount due Contractor for payment is full compensation for all Work done under the terms of the Contract in its original form; that the payment is full compensation for all Work ordered to be done under Change Orders; and that the payment is full compensation for all other Work done by Contractor and for all damages, losses, and expense incurred by Contractor for doing and furnishing everything relating to or arising out of the Work, and that Contractor waives all right to claim or receive any further compensation in addition to that provided for in the final payment except as provided in paragraph 15.07.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 Arbitration

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

17.02 Arbitration

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate 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 arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will 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.

- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witnesses. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will 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 will allow complete relief to be afforded among those who are already parties to the arbitration;
 - 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;
 - 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 - 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. 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.
- Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 Attorneys' Fees

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02. [Note: If there is no Paragraph 17.02, because neither arbitration nor any other dispute resolution process has been specified here in the Supplementary Conditions, then revise this to state "Add the following new Paragraph immediately after Paragraph 17.01" and revise the numbering accordingly].

17.03 Attorneys' Fees

A. 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.

ARTICLE 18—MISCELLANEOUS

Add the following new paragraphs immediately after Paragraph

18.10: SC-18.11 Labor and Legal Requirements

- A. Contractor shall abide by all regulations and laws that relate to labor that may affect the Work of this Contract, including Federal, State, County, and Townregulations.
- B. The latest Prevailing Wage Rate Schedules setting forth minimum wages and supplements for this area of the state, together with labor standard provisions and non-discrimination in employment provisions are appended to the Agreement.
- C. Contractor shall make provision for the disability benefits, unemployment insurance and social security required by law.
- D. The Contractor shall keep himself fully informed of all laws of the State (in which the Project is located) and of the United States of America, and of all municipal laws and ordinances in any manner affecting the Work of this Contract, and of all orders or decrees of any body or tribunal having any jurisdiction or authority in any manner affecting such Work, and shall be responsible for strict compliance therewith. If any clause of this Contract does not conform to any such law, such clause shall be void insofar as it conflicts with such law, and such law shall be operative in lieu thereof.
- E. Each and every provision of law and clause required by law to be inserted in this Contract should be, is and is deemed to be inserted herein, and if through a mistake or otherwise any such provision is not inserted, or it is not correctly inserted, then upon the application of either party the Contract shall forthwith be amended physically to make such insertion.
- F. If any provision herein shall be as to destroy the mutuality of this Contract or to render it invalid or illegal, then if such provision shall not appear to have been so material that without it the Contract would not have been made by the parties, it shall not be deemed to form part thereof but the balance of the Contract shall remain in full force and effect.

MINIMUM HOURLY WAGE RATES

The Contractor and every subcontractor shall post in a prominent and accessible place at the site of the Work, a legible copy of the Federal Wage Determination Rate Schedule (if such is included in the Contract Documents).

The rates established by each schedule are minimum, and all employees shall be paid no less than the established rate listed for each trade or occupation. In case of conflict between schedules in any one trade or occupation, the higher rate listed shall control and such higher rate shall be considered to be the minimum.

State: The minimum rates of wages and schedule of supplements to be provided for the various trades shall be in accordance with the Prevailing Wage Rate Schedule which is included herein. The rate of wage and schedule of supplements for any trade not appearing or mentioned in this schedule shall be in accordance with the prevailing rates established for that particular trade by the New York State Industrial Commissioner, or if the Owner be a City, by the Comptroller or other analogous officer of such City. Minimum Wages required to be paid shall include supplements for hospital, surgical, medical or other benefits as determined by Article 8 of the State Labor Law. If for any reason at any time the State of New York or the proper City Office, shall in any way supplement, change or amend such Prevailing Wage Rate Schedule, then the Contractor, Subcontractor or other person about or upon such public Work shall follow such Schedule as supplemented, changed or amended. In no case shall the Contractor be entitled to any additional compensation or extras because of any supplement, change, redetermination or amendment of the Prevailing Wage Rate Schedule.

Federal: If this project is to receive a grant-in-aid from the Federal Government, then the Contractor shall comply with the requirements of the Labor Standards and with such other Federal requirements specifically issued by the Federal Government, including compliance with the specific Federal Wage Determination Rate for this project. The above requirements are reproduced in these Contract Documents if the project is to receive Federal Aid. The appropriate form shall be used to record weekly payrolls, including amounts paid to employees and certifications by employer. Such records will be examined by the Federal Government and shall be carefully maintained by each Contractor and Subcontractor.

Kathy Hochul, Governor	
	MENT OF

Roberta Reardon, Commissioner

OCRRA

Maureen Nosik, Personnel Analyst 100 Elwood Davis Road North Syracuse NY 13212 Schedule Year
Date Requested
PRC#

2022 through 2023 08/02/2022 2022009038

Location

Rock Cut Road Transfer Station

Project ID#

Project Type updating transfer station property including demolition, plumbing, general construction, steel work and

electrical work

PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

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

The schedule is effective from July 2022 through June 2023. 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.

Responsibilities of the Department of Jurisdiction

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

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

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

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

Both the PW 16 and PW 200 forms are available for completion online.

Hours

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

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

Wages and Supplements

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

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.nv.gov.

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

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, contemperaneous, true, and accurate payroll records. At a minimum, payrolls must show the following information for each person employed on a public work project: Name, Address, Last 4 Digits of Social Security Number, Classification(s) in which the worker was employed, Hourly wage rate(s) paid, Supplements paid

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

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

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

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

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

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

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

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

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

Withholding of Payments

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

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

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

Summary of Notice Posting Requirements

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

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

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

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

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

Apprentices

Employees cannot be paid apprentice rates unless they are individually registered in a program registered with the NYS Commissioner of Labor. The allowable ratio of apprentices to 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 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

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

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

Interest and Penalties

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

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

Debarment

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

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

Criminal Sanctions

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

Discrimination

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

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

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

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

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

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

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

Workers' Compensation

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

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

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

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

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

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

Unemployment Insurance

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

Kathy Hochul, Governor	- TAMENT O

Roberta Reardon, Commissioner

OCRRA

Maureen Nosik, Personnel Analyst 100 Elwood Davis Road North Syracuse NY 13212 Schedule Year Date Requested PRC# 2022 through 2023 08/02/2022 2022009038

Location

Rock Cut Road Transfer Station

Project ID#

Project Type updating transfer station property including demolition, plumbing, general construction, steel work and

electrical work

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 InformationAll information must be supplied

Federal Employer Identification N	umber:	
Name:		
City: Amount of Contract: Approximate Starting Date: Approximate Completion Date:	Sta	te: Zip: Contract Type: [] (01) General Construction [] (02) Heating/Ventilation [] (03) Electrical [] (04) Plumbing [] (05) Other :

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

Social Security Numbers on Certified Payrolls:

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

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

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

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, 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 12240

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



Required Notice under Article 25-B of the Labor Law

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

The law says that you are an employee unless:

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

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

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

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

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

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

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

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

• **Civil Penalty** First offense: Up to \$2,500 per employee

Subsequent offense(s): Up to \$5,000 per employee

• Criminal Penalty First offense: Misdemeanor - up to 30 days in jail, up to a \$25,000 fine

and debarment from performing public work for up to one year.

Subsequent offense(s): Misdemeanor - up to 60 days in jail or up to a \$50,000 fine and debarment from performing public work for up to 5

years.

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

Employer Name:

New York State Department of Labor Bureau of Public Work

Attention Employees

THIS IS A: PUBLIC WORK PROJECT

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

Chapter 629 of the Labor Laws of 2007: These wages are set by law and must be posted at the work site. They can also be found at:

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

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

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

* For New York City government agency construction projects, please contact the Office of the NYC Comptroller at (212) 669-4443, or www.comptroller.nyc.gov – 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 of 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 requirement s on projects, and may issue stop-bid orders against public owners for non-compliance.

Other new monetary thresholds, and similar sealed bidding for non-Wicks projects, would apply to certain public authorities including municipal housing authorities, NYC Construction Fund, Yonkers Educational Construction Fund, NYC Municipal Water Finance Authority, Buffalo Municipal Water Finance Authority, Westchester County Health Care Association, Nassau County Health Care Corp., Clifton-Fine Health Care Corp., Erie County Medical Center Corp., NYC Solid Waste Management Facilities, and the Dormitory Authority.

Contractors must pay subcontractors within a 7 days period.

(07.19)

Introduction to the Prevailing Rate Schedule

Information About Prevailing Rate Schedule

This information is provided to assist you in the interpretation of particular requirements for each classification of worker contained in the attached Schedule of Prevailing Rates.

Classification

It is the duty of the Commissioner of Labor to make the proper classification of workers taking into account whether the work is heavy and highway, building, sewer and water, tunnel work, or residential, and to make a determination of wages and supplements to be paid or provided. It is the responsibility of the public work contractor to use the proper rate. If there is a question on the proper classification to be used, please call the district office located nearest the project. District office locations and phone numbers are listed below.

Prevailing Wage Schedules are issued separately for "General Construction Projects" and "Residential Construction Projects" on a county-by-county basis.

General Construction Rates apply to projects such as: Buildings, Heavy & Highway, and Tunnel and Water & Sewer rates.

Residential Construction Rates generally apply to construction, reconstruction, repair, alteration, or demolition of one family, two family, row housing, or rental type units intended for residential use.

Some rates listed in the Residential Construction Rate Schedule have a very limited applicability listed along with the rate. Rates for occupations or locations not shown on the residential schedule must be obtained from the General Construction Rate Schedule. Please contact the local Bureau of Public Work office before using Residential Rate Schedules, to ensure that the project meets the required criteria.

Payrolls and Payroll Records

Contractors and subcontractors are required to establish, maintain, and preserve for not less that six (6) years, contemporaneous, true, and accurate payroll records.

Every contractor and subcontractor shall submit to the Department of Jurisdiction (Contracting Agency), within thirty (30) days after issuance of its first payroll and every thirty (30) days thereafter, a transcript of the original payrolls, subscribed and affirmed as true under penalty of perjury.

Paid Holidays

Paid Holidays are days for which an eligible employee receives a regular day's pay, but is not required to perform work. If an employee works on a day listed as a paid holiday, this remuneration is in addition to payment of the required prevailing rate for the work actually performed.

Overtime

At a minimum, all work performed on a public work project in excess of eight hours in any one day or more than five days in any workweek is overtime. However, the specific overtime requirements for each trade or occupation on a public work project may differ. Specific overtime requirements for each trade or occupation are contained in the prevailing rate schedules.

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays.

The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Supplemental Benefits

Particular attention should be given to the supplemental benefit requirements. Although in most cases the payment or provision of supplements is straight time for all hours worked, some classifications require the payment or provision of supplements, or a portion of the supplements, to be paid or provided at a premium rate for premium hours worked. Supplements may also be required to be paid or provided on paid holidays, regardless of whether the day is worked. The Overtime Codes and Notes listed on the particular wage classification will indicate these conditions as required.

Effective Dates

When you review the schedule for a particular occupation, your attention should be directed to the dates above the column of rates. These are the dates for which a given set of rates is effective. The rate listed is valid until the next effective rate change or until the new annual determination which takes effect on July 1 of each year. All contractors and subcontractors are required to pay the current prevailing rates of wages and supplements. If you have any questions please contact the Bureau of Public Work or visit the New York State Department of Labor website (www.labor.ny.gov) for current wage rate information.

Apprentice Training Ratios

The following are the allowable ratios of registered Apprentices to Journey-workers.

For example, the ratio 1:1,1:3 indicates the allowable initial ratio is one Apprentice to one Journeyworker. The Journeyworker must be in place on the project before an Apprentice is allowed. Then three additional Journeyworkers are needed before a second Apprentice is allowed. The last ratio repeats indefinitely. Therefore, three more Journeyworkers must be present before a third Apprentice can be hired, and so on.

Please call Apprentice Training Central Office at (518) 457-6820 if you have any questions.

Title (Trade)	Ratio
Boilermaker (Construction)	1:1,1:4
Boilermaker (Shop)	1:1,1:3
Carpenter (Bldg.,H&H, Pile Driver/Dockbuilder)	1:1,1:4
Carpenter (Residential)	1:1,1:3
Electrical (Outside) Lineman	1:1,1:2
Electrician (Inside)	1:1,1:3
Elevator/Escalator Construction & Modernizer	1:1,1:2
Glazier	1:1,1:3
Insulation & Asbestos Worker	1:1,1:3
Iron Worker	1:1,1:4
Laborer	1:1,1:3
Mason	1:1,1:4
Millwright	1:1,1:4
Op Engineer	1:1,1:5
Painter	1:1,1:3
Plumber & Steamfitter	1:1,1:3
Roofer	1:1,1:2
Sheet Metal Worker	1:1,1:3
Sprinkler Fitter	1:1,1:2

If you have any questions concerning the attached schedule or would like additional information, please contact the nearest BUREAU of PUBLIC WORK District Office or write to:

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

District Office Locations:	Telephone #	FAX#
Bureau of Public Work - Albany	518-457-2744	518-485-0240
Bureau of Public Work - Binghamton	607-721-8005	607-721-8004
Bureau of Public Work - Buffalo	716-847-7159	716-847-7650
Bureau of Public Work - Garden City	516-228-3915	516-794-3518
Bureau of Public Work - Newburgh	845-568-5287	845-568-5332
Bureau of Public Work - New York City	212-932-2419	212-775-3579
Bureau of Public Work - Patchogue	631-687-4882	631-687-4902
Bureau of Public Work - Rochester	585-258-4505	585-258-4708
Bureau of Public Work - Syracuse	315-428-4056	315-428-4671
Bureau of Public Work - Utica	315-793-2314	315-793-2514
Bureau of Public Work - White Plains	914-997-9507	914-997-9523
Bureau of Public Work - Central Office	518-457-5589	518-485-1870

Onondaga County General Construction

Boilermaker 08/01/2022

JOB DESCRIPTION Boilermaker

DISTRICT 6

ENTIRE COUNTIES

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

WAGES

Per hour: 07/01/2022 01/01/2023 01/01/2024

Boilermaker \$ 36.23 \$ 37.23 \$ 38.23

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 26.01* \$ 26.31* \$ 26.62* + 1.23 + 1.23 + 1.23

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 Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

REGISTERED APPRENTICES

WAGES per hour: Six month terms at the following percentage of Journeyman's wage.

65%	65%	70%	75%	80%	85%	90%	95%
SUPPLEMEN	ITAL BENEFI	TS per hour:					
\$ 19.38*	\$ 19.38*	\$ 20.33*	\$ 21.26*	\$ 22.20*	\$ 23.16*	\$24.13*	\$ 25.06*
+ 1.23	+ 1.23	+ 1.23	+ 1.23	+ 1.23	+ 1.23	+ 1.23	+ 1.23

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

6-175

Carpenter - Building 08/01/2022

JOB DESCRIPTION Carpenter - Building

DISTRICT 6

Oth

ENTIRE COUNTIES

Onondaga

WAGES

Per hour:	07/01/2022	07/01/2023 Additional	07/01/2024 Additional	07/01/2025 Additional
Carpenter	\$ 30.15	\$ 1.05*	\$ 1.15*	\$ 1.15*
Floor Coverer	30.15			
Carpet Layer	30.15			
Drywall	30.15			
Diver - Wet Day	61.25			
Diver - Dry Day	31.15			
Dive Tender	31.15			

^{*}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 journeyman's rate of pay when performing piledriving/dock building work.
- Certified Welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work
- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):

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

0' to 80' no additional fee 81'to 100' additional \$.50 per foot 101'to 150' additional \$0.75 per foot 151'and deeper additional \$1.25 per foot

- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):

0' to 50' no additional fee

51' to 100' additional \$.75 per foot

101' and deeper additional \$1.00 per foot

- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 20.64

OVERTIME PAY

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

* NOTE - Saturday is also payable at straight time if the employee misses work, except where a doctor's or hospital's verification of illness is produced Monday through Friday when work was available to the employee.

HOLIDAY

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

NOTE: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

REGISTERED APPRENTICES

CARPENTER APPRENTICES

Wages per hour (1040 hour terms at the following percentage of Journeyman's base wage):

1st 2nd 3rd 4th 5th 55% 60% 65% 70% 80%

Supplemental Benefits per hour:

\$ 12.45 \$ 12.45 \$ 15.10 \$ 15.11 \$ 15.11

PILEDRIVER/DOCK BUILDER APPRENTICES

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

1st 2nd 3rd 4th 55%* 60%* 70%* 80%*

*Pile Driving/Dock Builder apprentices shall receive an additional \$0.25 per hour worked when performing piledriving/dock building work. Supplemental Benefits per hour:

\$ 12.45 \$ 12.45 \$ 15.10 \$ 15.11

LINOLEUM, RESILIENT TILE, AND CARPET LAYER APPRENTICES

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

1st 2nd 3rd 4th 55% 60% 70% 80%

Supplemental Benefits per hour:

\$ 12.45 \$ 12.45 \$ 15.10 \$ 15.11

ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- Certified Welders shall receive \$1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work
- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus \$1.50 per hour.

6-277 On

Carpenter - Building / Heavy&Highway

08/01/2022

DISTRICT 2

JOB DESCRIPTION Carpenter - Building / Heavy&Highway

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:	07/01/2022	07/01/2023	07/01/2024
		Additional	Additional
Carpenter - ONLY for			
Artificial Turf/Synthetic			
Sport Surface	\$ 33.08	\$ 2.25*	\$2.25*

^{*}To be allocated at a later date

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

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 25.45

OVERTIME PAY

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

HOLIDAY

Paid: See (5) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. Whan 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 Journeyman's wage):

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

Supplemental Benefits per hour:

 1st term
 \$ 16.97

 2nd term
 17.41

 3rd term
 19.40

 4th term
 19.84

2-42AtSS

Carpenter - Heavy&Highway

08/01/2022

DISTRICT 2

JOB DESCRIPTION Carpenter - Heavy&Highway

ENTIRE COUNTIES

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

WAGES

Per hour	07/01/2022	05/01/2023	05/01/2024
		Additional	Additional
Carpenter	\$ 34.13	\$ 2.50*	\$ 2.75*
Piledriver	34.13	2.50*	2.75*
Diver-Wet Day	59.13	2.50*	2.75*
Diver-Dry Day	35.13	2.50*	2.75*
Diver-Tender	35.13	2.50*	2.75*
, ,			

^{*}To be allocated at a later date.

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

- When project owner mandates a single irregular work shift, the employee will receive an additional \$3.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:

- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- All crew members aboard a submersible shall receive the Diver-Wet Day rate.
- Depth pay for Divers based upon deepest depth on the day of the dive (per diem payment):

0' to 50' no additional fee

51'to 100' additional \$.50 per foot 101'to 150' additional \$0.75 per foot 151'and deeper additional \$1.25 per foot

- Penetration pay for Divers based upon deepest penetration on the day of the dive (per diem payment):

0' to 50' no additional fee

51' to 100' additional \$.75 per foot

101' and deeper additional \$1.00 per foot

- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 25.45

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

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

- In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday. Employee must work scheduled work day before and after the Holiday.
- The employee must work their scheduled workday before and their scheduled workday after the holiday to receive holiday pay.

REGISTERED APPRENTICES

CAPRENTER APPRENTICES

Wages per hour (1040 hour terms at the following percentage of journeyman's base wage):

 1st
 2nd
 3rd
 4th
 5th

 65%
 70%
 75%
 80%
 85%

Supplemental Benefits per hour:

\$ 16.97 \$ 17.41 \$ 19.40 \$ 19.84 \$ 20.28

PILEDRIVER/DOCKBUILDER APPRENTICES

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

1st 2nd 3rd 4th 65% 70% 80% 85%

Supplemental Benefits per hour:

\$ 16.97 \$ 17.41 \$ 19.84 \$ 20.28

NOTE ADDITIONAL AMOUNTS PAID PER HOUR WORKED TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED:

- When project owner mandates a single irregular work shift, the employee will receive an additional \$3.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.50 per hour.
- Certified welders when required to perform welding work will receive an additional \$2.50 per hour.

2-277HH-Bro

<u>Electrician</u> 08/01/2022

JOB DESCRIPTION Electrician

DISTRICT 7

ENTIRE COUNTIES

Yates

PARTIAL COUNTIES

Cayuga: All Townships except Genoa, Ira, Locke, Sempronius, Sterling, Summerhill, and Victory

Onondaga: Townships of Elbridge and Skaneateles

Ontario: Only the Townships of Canadaigua, Farmington, Geneva, Gorham, Hopewell, Manchester, Phelps and Seneca

Seneca: All townships except Covert and Lodi

Wayne: Only the Townships of Arcadia, Galen, Lyons, Savannah and Village of Newark.

WAGES Per Hour:	07/01/2022	06/01/2023	06/01/2024
		Additional	Additional
Electrician	\$ 38.95	\$ 3.75	\$ 3.75
Teledata, Sound Wireman	38.95	3.75	3.75
Work from 4:30PM to 1:00AM*	44.79		
Work from 12:30AM to 9:00AM*	46.74		

^{*}Applies when multiple shifts of 8 hours for at least 5 days duration are mandated by the contracting agency.

IMPORTANT NOTE - WORKING ABOVE THE FLOOR:

Workmen required working 40 feet or more above a floor or working platform on swinging toothpick scaffolds or boatswain chairs, shall receive \$.50 above the applicable rate of pay. Where safety nets are installed according to O.S.H.A. standards and/or other State Safety Standards and/or bucket trucks used with a safety belt and lanyards according to O.S.H.A. standards or other State Safety Standards, this high time rate shall not apply. Any workman working over 50 feet high shall receive \$1.00 above the applicable rate and any workman working over 100 feet high shall receive \$2.00 above the applicable rate. These rates shall not apply to workers in bucket trucks and motorized scaffolds where safety harnesses are used.

Four(4), ten(10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 23.52 plus 3% of wage paid

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

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

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

REGISTERED APPRENTICES

WAGES: hourly terms at the following wages per hour:

1st term (0-1000 hrs)	\$ 17.60
2nd term (1001-2000 hrs)	19.50
3rd term (2001-3500 hrs)	21.50
4th term (3501-5000 hrs)	25.40
5th term (5001-6500 hrs)	29.25
6th term (6501-8000 hrs)	33.15

SUPPLEMENTAL BENEFITS per hour worked:

\$ 11.65 plus 3% of wage paid Appr. 1st and 2nd term All other terms \$ 21.52 plus 3% of wage paid

7-840 Z1

Electrician 08/01/2022

JOB DESCRIPTION Electrician

DISTRICT 6

ENTIRE COUNTIES

Cortland, Herkimer, Madison, Oneida, Oswego

PARTIAL COUNTIES

Cayuga: Townships of Ira, Locke, Sempronius, Sterling, Summerhill and Victory.

Chenango: Only the Townships of Columbus, New Berlin and Sherburne.

Onondaga: Entire County except Townships of Elbridge and Skaneateles.

Otsego: Only the Townships of Plainfield, Richfield, Springfield, Cherry Valley, Roseboom, Middlefield, Otsego, Exeter, Edmeston,

Burlington, Pittsfield and New Lisbon. Tompkins: Only the Township of Groton.

Wayne: Only the Townships of Huron, Wolcott, Rose and Butler.

WAGES

Per hour:	07/01/2022	06/01/2023 Additional
Electrician	\$ 42.00	\$ 3.00*
Teledata	42.00	
Cable Splicer	46.20	

^{*}To be allocated at a later date.

NOTE: Additional premiums for the following work listed:

- Additional \$2.00 per hour for work performed over 35 feet above the ground, floor, or roof levels or where work is required in tunnels, shafts, or under compressed air 35 feet below the ground level.
- Additional \$2.50 per hour for working over 50 feet above or below ground, floor, or roof level. This includes work on ladders, "toothpicks", scaffolds, boatswain chairs, towers, smokestacks or other open structures, or mechanical lifts used over 60 feet.

NOTES:

THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF EIGHT (8) HOURS FOR AT LEAST FIVE (5) DAYS DURATION WHICH MAY HAVE BEEN WORKED. WHEN TWO (2) SHIFTS OR THREE (3) SHIFTS ARE WORKED:

1ST SHIFT 8:00AM - 4:30PM: See rates posted above
2ND SHIFT 4:30 PM - 1:00 AM: Add 15% to rates posted above
3RD SHIFT 12:30 AM - 9:00 AM: Add 25% to rates posted above

Occupied Conditions: When necessary to perform alteration and/or renovation work and owner mandates (due to occupied conditions) prevent the work from being performed during "normal" working hours (defined as between 6:00 a.m. and 4:30 p.m. Monday through Friday), alternate hours may be worked, provided: 1) The hours are established for a minimum of five (5) days duration or the length of the job, whichever is shorter; and 2) An entire work scope within a job-site area is performed utilizing the varied hours. If these conditions are satisfied, all hours worked Monday through Friday of a shift that starts before or ends after the "normal" hours, shall be paid at the appropriate rate plus fifteen percent (15%). However, the following restrictions shall apply:

- 1) "Alternate" hours shall consist of a minimum of eight consecutive hours per day
- 2) Hours worked in excess of eight (8) hours per day, Monday through Friday, shall be paid at a rate of one and one-half times the applicable rate (day-shift + 15%)
- 3) Hours worked on Saturday shall be paid at time and one-half the applicable rate.
- 4) Hours worked on Sundays and Holidays shall be paid at double the straight time rate.
- 5) Work of a new construction nature may not be worked under these conditions.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour: 07/01/2022

Journeyman \$ 29.17 plus
*3% of hourly
wage paid

*NOTE: The 3% is based on the hourly wage paid, straight time or premium rate.

OVERTIME PAY

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

** Double Time after 10 hrs. on Saturday.

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

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

NOTE: If any of the above holidays fall on Saturday, Friday shall be observed as the holiday. If any of the above holidays fall on Sunday, Monday shall be observed as the holiday.

REGISTERED APPRENTICES

WAGES per hour: Hourly terms at the following percentage of Journeyman's wage.

1st period 40% (0-1000 hrs.) \$ 16.80 2nd period 45% (1001-2000) 18.90 3rd period 50% (2001-3500) 21.00

DISTRICT 6

4th period 60% (3501-5000)	25.20
5th period 70% (5001-6500)	29.40
6th Period 80% (6501-8000)	33.60

SUPPLEMENTAL BENEFITS per hour:

1st period \$ 13.09 plus

*3% of hourly wage paid

2nd period \$13.09 plus

*3% of hourly wage paid

3rd period \$ 26.55 plus

*3% of hourly wage paid

4th period \$27.07 plus

*3% of hourly wage paid

5th period \$ 27.60 plus

*3% of hourly wage paid

6th period \$ 28.12 plus

*3% of hourly wage paid

6-43

Elevator Constructor 08/01/2022

JOB DESCRIPTION Elevator Constructor

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: 07/01/2022

Elevator Constructor \$ 51.43 Helper 36.00

Four (4), ten (10) hour days may be worked for New Construction and Modernization Work at straight time during a week, Monday thru Thursday, or Tuesday thru Friday

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 36.885*

*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

^{*}NOTE: The 3% is based on the hourly wage paid, straight time rate or premium rate.

^{***} Four(4), ten (10) hour days are not permitted for Contract Work/Repair Work

HOLIDAY

Paid: See (5, 6, 15, 16) on HOLIDAY PAGE Overtime: See (5, 6, 15, 16) on HOLIDAY PAGE

NOTE: When a paid holiday falls on a Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on

Monday.

REGISTERED APPRENTICES

WAGES per hour: 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 Journeyman.

6-62.1

Glazier 08/01/2022

JOB DESCRIPTION Glazier

DISTRICT 5

ENTIRE COUNTIES

Cayuga, Cortland, Herkimer, Madison, Oneida, Onondaga, Oswego

WAGES

Per Hour: 07/01/2022

Glazier \$ 26.05

Four (4), ten (10) days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 23.64

OVERTIME PAY

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

*Note - Or circumstances beyond the control of the employer.

HOLIDAY

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

REGISTERED APPRENTICES

1000 hour terms:

Appr. 1st term	\$17.00
Appr. 2nd term	18.00
Appr. 3rd term	19.00
Appr. 4th term	20.00
Appr. 5th term	21.00
Appr. 6th term	22.00
Appr. 7th term	23.00
Appr. 8th term	24.00

Supplemental Benefits per hour:

Appr. 1st term	\$ 12.29
Appr. 2nd term	12.29
Appr. 3rd term	18.29
Appr. 4th term	18.29

^{**} IMPORTANT NOTICE **

 Appr. 5th term
 19.29

 Appr. 6th term
 19.29

 Appr. 7th term
 20.29

 Appr. 8th term
 20.29

5-677.Z-2

Insulator - Heat & Frost 08/01/2022

JOB DESCRIPTION Insulator - Heat & Frost

DISTRICT 6

ENTIRE COUNTIES

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

WAGES

Per hour: 07/01/2022

Asbestos Installer \$ 37.00

Insulation Installer

(On mechanical systems only)

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED SHIFTS WORKED.

 1ST SHIFT
 \$ 37.00

 2ND SHIFT
 42.55

 3RD SHIFT
 46.25

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 24.34

OVERTIME PAY

See (*B1, Q) on OVERTIME PAGE *NOTE: First 10 hours on Saturday

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (4,6) on HOLIDAY PAGE.
Triple time for Labor Day if worked.

NOTE: When a holiday falls on Sunday, the following Monday shall be observed as a holiday.

REGISTERED APPRENTICES

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

1st	2nd	3rd	4th
50%	60%	70%	80%
\$ 18.50	\$ 22.20	\$ 25.90	\$ 29.60

SUPPLEMENTAL BENEFITS per hour:

\$ 21.84 \$ 21.84 \$ 24.34 \$ 24.34

6-30-Syracuse

Ironworker 08/01/2022

JOB DESCRIPTION Ironworker

DISTRICT 6

ENTIRE COUNTIES

Broome, Cayuga, Cortland, Onondaga, Oswego, Seneca, Tioga, Tompkins

PARTIAL COUNTIES

Chenango: Only the Townships of Lincklaen, Otselic, Pitcher, Pharsalia, German, McDonough, Preston, Norwich, Smithville, Oxford, Guilford, Greene, Coventry, Bainbridge and Afton.

Jefferson: Only the Townships of Alexandria, Theresa, Clayton, Orleans, Cape Vincent, Lyme, Brownville, Pamelia, LeRay, Hounsfield, Watertown, Rutland, Adams, Henderson, Rodman, Ellisburg, Lorraine and Worth.

Madison: Only the Townships of Sullivan, Lenox, Lincoln, Fenner, Smithfield, Cazenovia, Nelson, DeRuyter and Georgetown.

Schuyler: Only the Townships of Cayuta, Catharine, Hector and Montour.

Wayne: Only the Townships of Galen, Savannah, Rose, Butler, Huron and Wolcott

WAGES

Structural, Reinforcing, Re-bar, Machinery Mover & Rigger, Ornamental & Curtain Wall, Window Wall, Pre-Glazed Metal Framed Windows Attached to Steel or Masonry Including Caulking, Fence Erector (Chain Link/Security), Sheeter/Bridge Rail, Pre-Cast Erector, Stone Derrickman, Pre-Engineered Building Erector, Welder

Per hour: 07/01/2022 07/01/2023

Additional

\$ 31.80 \$ 1.50*

NOTE: Shift work mandated by the project owner. All shifts will be (8) hours.

 1st Shift
 \$ 31.80

 2nd Shift
 34.98

 3rd Shift
 36.57

WHEN A SINGLE IRREGULAR SHIFT IS WORKED, WITH START TIMES BASED ON SECOND AND THIRD SHIFTS, ADD 10 % TO THE WAGE RATE POSTED ABOVE.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$30.53

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

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

NOTE: Any holiday which occurs on Sunday shall be observed the following Monday.

REGISTERED APPRENTICES

WAGES per hour: One year terms at the following rates.

1st 2nd 3rd 4th \$ 19.50 \$ 21.50 \$ 23.50 \$ 25.50

SUPPLEMENTAL BENEFITS per hour:

 1st year
 \$ 11.53

 2nd year
 19.58

 3rd year
 20.73

 4th year
 21.88

Laborer - Building 08/01/2022

JOB DESCRIPTION Laborer - Building

DISTRICT 7

6-60

ENTIRE COUNTIES

Onondaga

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 for the laborers classification only.

- 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 laborers classification.
- All work outside of the building, if not included in the building contract, will fall under the Heavy/Highway rates.

Per hour:	07/01/2022	06/01/2023	06/01/2024	06/01/2025
		Additional	Additional	Additional
Building Laborer	\$ 28.30	\$ 2.00	\$ 1.90	\$ 1.90
Asbestos, Toxic &				
Hazardous Waste Work	30.80	2.00	1.90	1.90

SUPPLEMENTAL BENEFITS

Per hour:

^{*}To be allocated at a later date.

Journey Worker \$ 22.42

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, it will be celebrated on Monday.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of Journey Worker's wage.

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

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journey Worker

7-633 bON

Laborer - Heavy&Highway

08/01/2022

JOB DESCRIPTION Laborer - Heavy&Highway

DISTRICT 7

ENTIRE COUNTIES

Onondaga

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, Gunite, 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:	07/01/2022	07/01/2023 Additional	07/01/2024 Additional
GROUP A	# 22 46		
GROUP A	\$ 32.46	\$ 3.00	\$ 2.50
GROUP B	32.66	3.00	2.50
GROUP C	32.86	3.00	2.50
GROUP D	33.06	3.00	2.50
GROUP E	35.66	3.00	2.50

NOTE: A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional \$3.00 per hour. Night work, when mandated by DOT shall be paid an additional \$3.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

Journey Worker \$ 24.05

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 Journey Worker's GROUP B wage.

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

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journey Worker

7-633 hON

Laborer - Tunnel 08/01/2022

JOB DESCRIPTION Laborer - Tunnel

DISTRICT 7

ENTIRE COUNTIES

Onondaga

WAGES

GROUP A: Changehouse Men

GROUP B: Miners and all Machine Men, Safety Miner, all Shaftwork, 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: Blaster

GROUP D: Hazardous Waste Work on a State and or Federally designated waste site, and where relevant regulations require employees to use personal protection.

Per hour:	07/01/2022	07/01/2023	07/01/2024
		Additional	Additional
GROUP A	\$ 34.34	\$ 3.00	\$ 2.50
GROUP B	34.54	3.00	2.50
GROUP C	35.54	3.00	2.50
GROUP D	38.54	3.00	2.50

NOTE: A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional \$3.00 per hour.

SUPPLEMENTAL BENEFITS

Per hour:

Journey Worker \$ 25.35

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

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

NOTE: If a holiday falls on Saturday, it will be celebrated on Friday. If a holiday falls on Sunday, it will be celebrated on Monday. In the event that men work on this Sunday holiday, they shall be paid double time. In the event that men work on Monday, they shall be compensated at 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 Journey Worker's GROUP B wage:

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

SUPPLEMENTAL BENEFITS per hour:

All Terms: Same as Journey Worker

7-633T (ON)

Lineman Electrician 08/01/2022

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.

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. (Ref #14.01.01)

Per hour:	07/01/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 56.00	\$ 57.40	\$ 58.90
Crane, Crawler Backhoe	56.00	57.40	58.90
Welder, Cable Splicer	56.00	57.40	58.90
Digging Mach. Operator	50.40	51.66	53.01
Tractor Trailer Driver	47.60	48.79	50.07
Groundman, Truck Driver	44.80	45.92	47.12
Equipment Mechanic	44.80	45.92	47.12
Flagman	33.60	34.44	35.34

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

Lineman, Technician	\$ 56.00	\$ 57.40	\$ 58.90
Crane, Crawler Backhoe	56.00	57.40	58.90
Cable Splicer	61.60	63.14	64.79
Certified Welder -			
Pipe Type Cable	58.80	60.27	61.85
Digging Mach. Operator	50.40	51.66	53.01
Tractor Trailer Driver	47.60	48.79	50.07
Groundman, Truck Driver	44.80	45.92	47.12
Equipment Mechanic	44.80	45.92	47.12
Flagman	33.60	34.44	35.34

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

Lineman, Tech, Welder	\$ 57.32	\$ 58.72	\$ 60.22
Crane, Crawler Backhoe	57.32	58.72	60.22
Cable Splicer	63.05	64.59	66.24
Certified Welder -			
Pipe Type Cable	60.19	61.66	63.23
Digging Mach. Operator	51.59	52.85	54.20
Tractor Trailer Driver	48.72	49.91	51.19
Groundman, Truck Driver	45.86	46.98	48.18
Equipment Mechanic	45.86	46.98	48.18
Flagman	34.39	35.23	36.13

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

Lineman, Tech, Welder	\$ 58.51	\$ 59.91	\$ 61.41
Crane, Crawler Backhoe	58.51	59.91	61.41
Cable Splicer	58.51	59.91	61.41
Digging Mach. Operator	52.66	53.92	55.27
Tractor Trailer Driver	49.73	50.92	52.20
Groundman, Truck Driver	46.81	47.93	49.13
Equipment Mechanic	46.81	47.93	49.13
Flagman	35.11	35.95	36.85

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT 8:00 AM to 4:30 PM REGULAR RATE

2ND SHIFT 4:30 PM to 1:00 AM REGULAR RATE PLUS 17.3 % 3RD SHIFT 12:30 AM to 9:00 AM REGULAR RATE PLUS 31.4 %

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	07/01/2022	05/01/2023	05/06/2024
Journeyman	\$ 25.90 *plus 7% of the hourly wage paid	\$ 26.40 *plus 7% of the hourly wage paid	\$ 26.90 *plus 7% of the hourly wage paid
Journeyman Lineman or Equipment Operators with Crane License	\$ 27.90 *plus 7% of the hourly wage paid	\$ 29.40 *plus 7% of the hourly wage paid	\$ 30.90 *plus 7% of the hourly wage paid

^{*}The 7% is based on the hourly wage paid, straight time or premium time.

OVERTIME PAY

See (B, E, Q,) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction. NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

Overtime See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyman Lineman wage.

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

SUPPLEMENTAL BENEFITS per hour:

07/01/2022	05/01/2023	05/06/2024
\$ 25.90	\$ 26.40	\$ 26.90
*plus 7% of	*plus 7% of	*plus 7% of
the hourly	the hourly	the hourly
wage paid	wage paid	wage paid

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

6-1249a

Lineman Electrician - Teledata

08/01/2022

JOB DESCRIPTION Lineman Electrician - Teledata

DISTRICT 6

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour:

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

	07/01/2022	01/01/2023	01/01/2024	01/01/2025
Cable Splicer	\$ 36.28	\$ 37.73	\$ 39.24	\$ 40.81
Installer, Repairman	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Teledata Lineman	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Tech., Equip. Operator	\$ 34.43	\$ 35.81	\$ 37.24	\$ 38.73
Groundman	\$ 18.25	\$ 18.98	\$ 19.74	\$ 20.53

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

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED:

1ST SHIFT REGULAR RATE

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

SUPPLEMENTAL BENEFITS

Per hour:	07/01/2022	01/01/2023	01/01/2024	01/01/2025
Journeyman	\$ 5.14	\$ 5.14	\$ 5.14	\$ 5.14
	*plus 3% of	*plus 3% of	*plus 3% of	*plus 3% of
	the hourly	the hourly	the hourly	the hourly
	wage paid	wage paid	wage paid	wage paid

^{*}The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (1) on HOLIDAY PAGE
Overtime: See (5, 6, 16) on HOLIDAY PAGE

6-1249LT - Teledata

Lineman Electrician - Traffic Signal, Lighting

08/01/2022

JOB DESCRIPTION Lineman Electrician - Traffic Signal, Lighting

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Cortland, Delaware, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orleans, Oswego, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Lineman/Technician shall perform all overhead aerial work. A Lineman/Technician on the ground will install all electrical panels, connect all grounds, install and connect all electrical conductors which includes, but is not limited to road loop wires; conduit and plastic or other type pipes that carry conductors, flex cables and connectors, and to oversee the encasement or burial of such conduits or pipes.

A Groundman/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. (Ref #14.01.01)

Per hour:	07/01/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 48.19	\$ 49.32	\$ 50.54
Crane, Crawler Backhoe	48.19	49.32	50.54
Certified Welder	50.60	51.79	53.07
Digging Machine	43.37	44.39	45.49
Tractor Trailer Driver	40.96	41.92	42.96
Groundman, Truck Driver	38.55	39.46	40.43
Equipment Mechanic	38.55	39.46	40.43
Flagman	28.91	29.59	30.32

Above rates are applicable for installation, testing, operation, maintenance and repair on all Traffic Control (Signal) and Illumination (Lighting) projects, Traffic Monitoring Systems, and Road Weather Information Systems. Includes digging of holes for poles, anchors, footer foundations for electrical equipment; assembly of all electrical materials or raceway; placing of fish wire; pulling of cables, wires or fiber optic cable through such raceways; splicing of conductors; dismantling of such structures, lines or equipment.

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED BETWEEN THE HOURS LISTED BELOW:

1ST SHIFT	8:00 AM TO 4:30 PM	REGULAR RATE
2ND SHIFT	4:30 PM TO 1:00 AM	REGULAR RATE PLUS 17.3%
3RD SHIFT	12:30 AM TO 9:00 AM	REGULAR RATE PLUS 31.4%

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	07/01/2022	05/01/2023	05/06/2024
Journeyman	\$ 25.90	\$ 26.40	\$ 26.90
	*plus 7% of	*plus 7% of	*plus 7% of
	the hourly	the hourly	the hourly
	wage paid	wage paid	wage paid
Journeyman Lineman or	\$ 27.90	\$ 29.40	\$ 30.90
Equipment Operators	*plus 7% of	*plus 7% of	*plus 7% of
with Crane License	the hourly	the hourly	the hourly
	wage paid	wage paid	wage paid

^{*}The 7% is based on the hourly wage paid, straight time or premium time.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. *Note* Double time for all emergency work designated by the Dept. of Jurisdiction. NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day. Overtime: See (5, 6, 8, 13, 25) on HOLIDAY PAGE plus Governor of NYS Election Day.

NOTE: All paid holidays falling on Saturday shall be observed on the preceding Friday. All paid holidays falling on Sunday shall be observed on the following Monday. Supplements for holidays paid at straight time.

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the applicable Journeyman Lineman wage.

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

SUPPLEMENTAL BENEFITS per hour:

07/01/2022	05/01/2023	05/06/2024
\$ 25.90	\$ 26.40	\$ 26.90
*plus 7% of	*plus 7% of	*plus 7% of
the hourly	the hourly	the hourly
wage paid	wage paid	wage paid

^{*}The 7% is based on the hourly wage paid, straight time or premium time.

6-1249a-LT

Lineman Electrician - Tree Trimmer

08/01/2022

JOB DESCRIPTION Lineman Electrician - Tree Trimmer

DISTRICT 6

ENTIRE COUNTIES

Albany, Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Wyoming, Yates

WAGES

Applies to line clearance, tree work and right-of-way preparation on all new or existing energized overhead or underground electrical, telephone and CATV lines. This also would include stump removal near underground energized electrical lines, including telephone and CATV lines.

07/01/2022	01/01/2023
\$ 28.25	\$ 29.80
24.98	26.35
24.98	26.35
20.80	21.94
17.13	18.07
13.20*	13.20*
	\$ 28.25 24.98 24.98 20.80 17.13

^{*}NOTE: Subject to change due to any minimum wage increases.

SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	07/01/2022	01/01/2023
Journeyman	\$ 10.23 *plus 3% of	\$ 10.48 *plus 3% of
	the hourly	the hourly
	wage paid	wage paid

^{*} The 3% is based on the hourly wage paid, straight time rate or premium rate.

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

NOTE: WAGE CAP - Double the straight time hourly base wage shall be the maximum hourly wage compensation for any hour worked. Contractor is still responsible to pay the hourly benefit amount for each hour worked.

HOLIDAY

Paid: See (5, 6, 8, 15) 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 08/01/2022

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES

Cayuga, Onondaga, Oswego

DISTRICT 12

PARTIAL COUNTIES

Madison: The townships of Sullivan and Cazenovia ONLY

WAGES Per hour

07/01/2022

Tile/Terrazzo/Marble

 Setter
 \$ 32.92

 Finisher
 26.46

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman Setter \$ 20.24 Journeyman Finisher 19.19

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
 \$ 13.96

 3rd & 4th Term
 17.10

 5th Term
 18.67

 6th Term
 20.24

Finisher:

1st & 2nd Term \$ 13.06 All others \$ 16.12

12-2TS.3

DISTRICT 12

Mason - Building 08/01/2022

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES

Onondaga

WAGES

Per hour

07/01/2022

Cement Mason \$ 32.43

DISTRICT 12

Plasterer 32.43

Ext insulation finish

systems-plasterer(EIFF) 32.43

Additional \$0.50 per hour for Scaffold work, Swing Stage and Rolling Stage

Additional \$0.25 per hour for Grinder Operator

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.52

OVERTIME PAY

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

*Only on EIFF work can Saturday be used as a makeup day.

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 journeyman's wage

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

Supplemental Benefits per hour worked

All Terms \$ 22.52

12-2b-on

Mason - Building 08/01/2022

JOB DESCRIPTION Mason - Building

ENTIRE COUNTIES

Cayuga, Onondaga

PARTIAL COUNTIES

Madison: The townships of Sullivan and Cazenovia ONLY

WAGES

Per hour 07/01/2022

Bricklayer/Blocker\$ 36.80Fireproofing*36.80Stone Mason36.80Pointer/Caulker/Cleaner36.80Cement Mason/Plaster**36.80

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.

(**)Refer to Onondaga Mason Building wage sheet 1-2b-on for Cement/Plaster work in Onondaga County

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.38

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 journeyman'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 \$ 22.38

12-2b.3

Mason - Heavy&Highway 08/01/2022

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 12

ENTIRE COUNTIES

PARTIAL COUNTIES

Onondaga: This rate only applies to Heavy & Highway Cement Mason or Plaster Work in Onondaga County.

WAGES

Per hour 07/01/2022

Cement Mason \$ 35.61

- Additional \$1.00 per hour if working on swing scaffolding or staging (scaffold suspended by means of ropes or cabled from hooks placed over papapet walls or windows, etc).
- Additional \$0.25 per hour when operating a hand held power grinder.

SUPPLEMENTAL BENEFITS

Per hour worked

Journeyman \$ 22.57

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE If the holiday falls on Sunday, holiday pay for next day Monday.

REGISTERED APPRENTICES

Wages per hour

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

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

Supplemental Benefits per hour worked

0 to 500 Hours \$ 15.42 All Others \$ 22.57

12-2h/h on

Mason - Heavy&Highway 08/01/2022

JOB DESCRIPTION Mason - Heavy&Highway

DISTRICT 12

ENTIRE COUNTIES

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

PARTIAL COUNTIES

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on. Page 39

WAGES

Per hour

07/01/2022

Mason &

Bricklayer \$40.76

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

\$ 21.48

OVERTIME PAY

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

HOLIDAY

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

Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

REGISTERED APPRENTICES

Wages per hour

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

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

Supplemental Benefits per hour worked

0 to 500 Hours \$ 12.98 All Other 21.48

Millwright 08/01/2022

JOB DESCRIPTION Millwright

DISTRICT 6

12-2hh.1

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: 07/01/2022

Millwright - Power Generation \$41.23

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 he/she is 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) are 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:

Journeyman \$ 26.72*

*NOTE: Subject to OT premium

OVERTIME PAY

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

Prevailing Wage Rates for 07/01/2022 - 06/30/2023 Last Published on Aug 01 2022

*NOTE - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

HOLIDAY

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

NOTE: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

WAGES per hour: One year terms at the following percentage of Journeyman'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 1.00
(500' and below)

SUPPLEMENTAL BENEFITS per hour:

Appr. 1st year	\$ 11.83
Appr. 2nd year	22.26
Appr. 3rd year	23.74
Appr. 4th year	25.24

6-1163Power

Millwright 08/01/2022

JOB DESCRIPTION Millwright

DISTRICT 2

ENTIRE COUNTIES

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

WAGES

Per hour: 07/01/2022

Building \$ 32.50 Heavy & Highway 34.50

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

- Certified Welders shall receive \$1.75 per hour in addition to the current Millwrights rate provided he/she is directed to perform certified welding.
- For Building work if a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.50 premium per hour for Building work.
- For Heavy & Highway work if the work is performed at a State or Federally designated hazardous waste site where employees are required to wear protective gear, the employees performing the work shall receive an additional \$2.00 per hour over the millwright heavy and highway wage rate for all hours worked on the day protective gear was worn.
- An employee performing the work of a machinist shall receive \$2.00 per hour in addition to the current Millwrights rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.
- When performing work underground at 500 feet and below, the employee shall receive an additional \$1.00.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 24.41

OVERTIME PAY

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

*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

HOLIDAY

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

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

REGISTERED APPRENTICES

Wages per hour:

(1) year terms at the following percentage of Journeyman's rate.

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

Supplemental Benefits per hour:

Apprentices:

 1st term
 \$ 11.33

 2nd term
 20.49

 3rd term
 21.79

 4th term
 23.11

2-1163.2

Operating Engineer - Building

08/01/2022

JOB DESCRIPTION Operating Engineer - Building

JOB BEGGIAI FIGHT 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.

CLASSIFICATION A1: Cranes, all types* (Includes Boom Truck, Cherry Picker, Dragline, Overhead Crane, Pile Driver, Truck Crane)

CLASSIFICATION 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), Burning Plant Operator, Cableway, Caisson Auger, Central Mix Plant (automated), Concrete Pump, Crusher (Rock), Derrick, 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, Fork Lift (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.

CLASSIFICATION 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), Fork Lift (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

CLASSIFICATION 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, Fork Lift ("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: Building	07/01/2022
Master Mechanic	\$ 43.42
Asst. Master Mechanic	42.42
Class A1*	42.92
Class A1-Tower Crane*	45.42
Class A	41.42
Class B	39.30
Class C	35.08

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 65 ton to 199 ton capacity - A1 rate plus \$ 1.50 All cranes 200 ton to 399 ton capacity - A1 rate plus \$ 2.50 All cranes 400 ton capacity and over - A1 rate plus \$ 3.50

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$29.10

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

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

NOTE: If the holiday falls on Sunday, it will be celebrated on Monday.

REGISTERED APPRENTICES

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

1st year	60%
2nd year	65%
3rd year	70%
4th vear	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: Same as Journeyman

6-158-545b.s

Operating Engineer - Heavy&Highway

08/01/2022

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 A: Asphalt Curb Machine (self-propelled, slipform); Asphalt Paver; Automated Concrete Spreader (CMI type); Automatic Fine Grader; Backhoe (except tractor mounted, rubber tired); Backhoe Excavator, Full Swing (CAT 212 or similar type); Back Filling Machine; Belt Placer (CMI type); Blacktop Plant (automated); Boom Truck; Cableway; Bull Dozer being operated with active GPS; Caisson Auger; Central Mix Concrete Plant (automated); Cherry Picker*; Concrete Curb Machine (self-propelled, slipform); Concrete Pump; Crane*; Derricks*; Directional Boring/Drilling Machine; Dragline*; 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; Overhead Crane* (gantry or straddle type); Pavement Breaker (SP Wertgen; PB-4 and similar type); Profiler (over 105 h.p.); Pile Driver*; Power Grader; Quad 9; Quarry Master (or equivalent); Scraper; Shovel; Side Boom; Slip Form Paver; Tractor Drawn Belt-Type Loader; Truck Crane*; 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 (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); 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; Fork Lift; 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); 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: H/H	07/01/2022
Master Mechanic	\$ 49.50
CLASS A*	48.15
CLASS B	47.27
CLASS C	43.99

- (*) Premiums for CRANES are based upon Class A rates with the following premiums:
- ---Additional \$4.00 per hr for Tower Cranes, including self erecting.
- ---Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturer's rating of fifty tons and over.
- ---Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

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.

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.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour: 07/01/2022

Journeyman \$ 30.60

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

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

DISTRICT 12

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: (1000) hour terms at the following percentage of Journeyman's CLASS B wage.

 1st term
 60%

 2nd term
 70%

 3rd term
 80%

 4th Term
 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 Journeyman

6-158-545h

Operating Engineer - Survey Crew

08/01/2022

JOB DESCRIPTION Operating Engineer - Survey Crew

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.

07/01/2022

Party Chief \$47.37 Instrument Person 43.51 Rod Person 32.26

Additional \$3.00/hr. for Tunnel Work Additional \$2.50/hr. for Hazardous Work Site

SUPPLEMENTAL BENEFITS

Per hour worked:

Journeyman \$28.05

OVERTIME PAY

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

*Note: \$24.10/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:

07/01/2022

 0-1000
 60%

 1001-2000
 70%

 2001-3000
 80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000 \$ 19.83 / PHP \$17.03 1001-2000 22.85 / " 19.45 2001-3000 25.88 / " 21.93

NOTE: PHP is premium hours paid when worked.

12-158-545 D.H.H.

Operating Engineer - Survey Crew - Consulting Engineer

08/01/2022

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.

07/01/2022

Party Chief \$47.37 Instrument Person 43.51 Rod Person 32.26

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 \$28.05

OVERTIME PAY

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

*Note: \$24.10/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 percentage of Rod Persons Wage:

07/01/2022

 0-1000
 60%

 1001-2000
 70%

 2001-3000
 80%

SUPPLEMENTAL BENEFIT per hour worked:

0-1000 \$ 19.83 / PHP \$17.03 1001-2000 \$ 22.85 / " 19.45 2001-3000 \$ 25.88 / " 21.93

NOTE: PHP is premium hours paid when worked.

12-158-545 DCE

Operating Engineer - Tunnel

08/01/2022

DISTRICT 7

JOB DESCRIPTION Operating Engineer - Tunnel

ENTIRE COUNTIES

Albany, Allegany, Broome, Cayuga, Chemung, Chenango, Clinton, Columbia, Cortland, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Livingston, Madison, Monroe, Montgomery, Oneida, Onondaga, Ontario, Oswego, Otsego, Rensselaer,

Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Tioga, Tompkins, Warren, Washington, Wayne, Yates

PARTIAL COUNTIES

Dutchess: Northern part of Dutchess, to the northern boundary line of the City of Poughkeepie, then due east to Route 115 to Bedell Road, then east along Bedell Road to VanWagner Road, then north along VanWagner Road to Bower Road, then east along Bower Road to Rte. 44 east to Rte. 343, then along Rte. 343 east to the northern boundary of the Town of Dover Plains and east along the northern boundary of the Town of Dover Plains, to the borderline of the State of Connecticut. Genesee: Only that portion of the county that lies east of a line drawn down the center of Route 98 and the entirety of the City of Batavia.

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 (selfpropelled 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); Revinius Widener; Shell Winder; Steam Cleaner; Tractor

Per hour:	07/01/2022
Master Mechanic	\$ 52.60
CLASS A	50.19
CLASS B	48.97
CLASS C	46.18
CLASS D	43.17

Additional \$5.00 per hour for Hazardous Waste Work on a state or federally designated hazardous waste site where the Operating Engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin and eye protection. Fringe benefits will be paid at the hourly wage premium.

CRANES:

Crane 1: All cranes, including self-erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

Crane 1 \$ 54.19 Crane 2 53.19 Crane 3 52.19

SUPPLEMENTAL BENEFITS

Per hour:

\$ 23.70 + 9.35*

OVERTIME PAY

See (B, B2, E, Q, X) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6) on HOLIDAY PAGE Overtime: See (5, 6) on HOLIDAY PAGE If a holiday falls on Sunday, it shall be observed on Monday.

REGISTERED APPRENTICES

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

 1st term
 60%

 2nd term
 65%

 3rd term
 70%

 4th term
 75%

SUPPLEMENTAL BENEFITS per hour: Same as Journeyman

7-158-832TL.

Painter 08/01/2022

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

07/01/2022	05/01/2023 Additional	05/01/2024 Additional
\$ 24.70	\$ 1.76*	\$ 1.71*
24.70	1.76*	1.71*
24.70	1.76*	1.71*
24.70	1.76*	1.71*
24.95	2.01*	1.96*
24.95	2.01*	1.96*
25.45	2.01*	1.96*
25.20	1.76*	1.71*
25.20	1.76*	1.71*
25.20	1.76*	1.71*
25.20	1.76*	1.71*
25.20	1.76*	1.71*
25.20	1.76*	1.71*
25.20	1.76*	1.71*
26.20	1.76*	1.71*
26.90	1.76*	1.71*
	\$ 24.70 24.70 24.70 24.70 24.95 24.95 25.45 25.20 25.20 25.20 25.20 25.20 25.20 25.20	\$ 24.70 \$ 1.76* 24.70 1.76* 24.70 1.76* 24.70 1.76* 24.95 2.01* 24.95 2.01* 25.45 2.01* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76* 25.20 1.76*

^{*}To be allocated at a later date.

NOTE: FOR ANY SHIFT WHICH STARTS PRIOR TO 6:00 AM OR AFTER 12:00 NOON, 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.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

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

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 25.63

OVERTIME PAY

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

* NOTE - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee. On exterior work only, if work was missed during the week due to inclement weather, Saturday may be worked at straight time.

HOLIDAY

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

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

REGISTERED APPRENTICES

WAGES per hour:

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

3rd

\$ 7.50

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	r/ Finisher: 750) hour terms a	t the following	wage rate:			
1st	2nd	3rd	4th	5th	6th		
\$ 20.00	\$ 20.50	\$ 21.00	\$ 21.50	\$ 22.00	\$ 23.00		
SUPPLEMEN	ITAL BENEFIT	S per hour:					
Painter/Decor	ator:						
1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 6.50	\$ 6.50	\$ 7.50	\$ 7.50	\$ 10.50	\$ 10.50	\$ 13.00	\$ 13.00

4th

\$ 10.00

6-31

Painter 08/01/2022

6th

\$ 12.00

JOB DESCRIPTION Painter

DISTRICT 3

ENTIRE COUNTIES

Drywall Taper/ Finisher:

1st

\$ 7.50

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

5th

\$ 10.00

WAGES

Per hour: 07/01/2022

2nd

\$ 7.50

Bridge \$41.06 Tunnel 41.06 Tank* 39.06

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.

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:

\$ 29.89

OVERTIME PAY

Exterior work only See (B, E4, F^* , R) on OVERTIME PAGE.

All other work See (B, F*, R) on OVERTIME PAGE.

*Note - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

HOLIDAY

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

REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage rate:

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 08/01/2022

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

 07/01/2022

 Metal Polisher
 \$ 37.78

 Metal Polisher*
 38.80

 Metal Polisher**
 41.78

SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2022

Journeyworker:

All classification \$ 11.24

OVERTIME PAY

See (B, E, P, T) on OVERTIME PAGE

HOLIDAY

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

REGISTERED APPRENTICES

Wages per hour:

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

	07/01/2022
1st year	\$ 16.00
2nd year	17.00
3rd year	18.00
1st year*	\$ 16.39
2nd year*	17.44
3rd year*	18.54
1st year**	\$ 18.50
2nd year**	19.50
3rd year**	20.50

^{*}Note: Applies on New Construction & complete renovation

Supplemental benefits:

Per hour:

1st year	\$ 7.99
2nd year	7.99
3rd year	7.99

^{*}Note: Applies on New Construction & complete renovation

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

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

Plumber 08/01/2022

JOB DESCRIPTION Plumber DISTRICT 6

ENTIRE COUNTIES

Chemung, Cortland, Onondaga, Schuyler, Tompkins

PARTIAL COUNTIES

Madison: Only the Townships of Sullivan, Cazenovia and DeRuyter.

Seneca: Only the Townships of Covert and Lodi.

Steuben: Only the Townships of Addison, Bath, Bradford, Campbell, Caton, Corning, Erwin, Hornby, Lindley, Pulteney, Rathbone, Thurston,

Tuscarora, Urbana and Wayne.

Tioga: Only the Townships of Barton, Berkshire, Candor, Richford, Spencer, Nichols and Tioga.

WAGES

Per hour:	07/01/2022	05/01/2023 Additional
Plumber/Steamfitter	\$ 39.51	\$ 3.00*
Pipefitter/Welder/HVAC	39.51	
Refrigeration	39.51	

^{*}To be allocated at a later date.

SINGLE IRREGULAR WORK SHIFT: Additional 15% premium added to the wages above for a single irregular work shift outside of normal working hours.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 26.40

*NOTE: \$10.27 of the supplemental benefits are paid at the same premium as shown for overtime work performed at 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: If a holiday falls on Saturday, the holiday will be observed on the prior Friday. If a holiday falls on Sunday, it will be observed on the following Monday.

REGISTERED APPRENTICES

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

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

SUPPLEMENTAL BENEFITS per hour*:

1st	\$ 12.50
2nd	23.06
3rd	23.43
4th	24.16
5th	25.27

*NOTE: Below is the portion of supplemental benefits paid at overtime premiums for work performed at semi-conductor manufacturer and/or fabrication plants:

1st	n/a
2nd	\$ 8.58
3rd	\$ 8.77
4th	\$ 9.14
5th	\$ 9.71

6-81-SF

Roofer 08/01/2022

JOB DESCRIPTION Roofer

DISTRICT 6

ENTIRE COUNTIES

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

WAGES

Per hour:	07/01/2022	06/01/2023	06/01/2024
		Additional	Additional
Roofer, Waterproofer	\$ 31.25	\$ 2.00*	\$ 2.00*

Additional per hour:

Green Roofing*\$ 0.25Pitch Removal & Appl.1.50Asbestos Abatement1.50Irregular Shift(s)**4.00

NOTES:

Does not include metal flashing, gravel stop and metal roofing; see Sheetmetal Worker wage schedule.

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 24.85

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.

\$ 0.75

REGISTERED APPRENTICES

WAGES per hour: 1000 hour terms at the following percentage of the Journeyman'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
 \$ 18.73

 2nd term
 20.40

 3rd term
 23.85

 4th term
 24.85

Additional contribution on any Asbestos Abatement work

6-195

Sheetmetal Worker 08/01/2022

^{*}To be allocated at a later date.

^{*} 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.

^{**} WHEN MANDATED BY THE OWNER OR CONTRACTING AGENCY, THERE IS AN ADDITIONAL PREMIUM FOR HOURS WORKED BEFORE 5:30AM AND AFTER 5:30PM.

JOB DESCRIPTION Sheetmetal Worker

DISTRICT 6

ENTIRE COUNTIES

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

WAGES

 Per hour:
 07/01/2022
 05/01/2023
 05/01/2024

 Additional
 Additional

 Sheetmetal Worker:
 \$ 1.51*
 \$ 1.26*

**(under \$10 million) \$ 32.89 **(over \$10 million) 33.89

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

SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 21.47 plus

3% of hourly wage paid

NOTE: The 3% is based on the hourly wage paid, straight time rate or premium rate.

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 Journeyman's wage.

1st	2nd	3rd	4th	5th
45%	55%	65%	75%	85%
\$ 14.80*	\$ 18.09	\$ 21.38	\$ 24.67	\$ 27.96

^{*}Note: subject to change due to any minimum wage increase.

SUPPLEMENTAL BENEFITS per hour:

\$ 12.80* \$ 13.77* \$ 14.72* \$ 16.72* \$ 17.69*

6-58

Sprinkler Fitter 08/01/2022

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 07/01/2022

Sprinkler \$38.15

Fitter

SUPPLEMENTAL BENEFITS

Per hour

Journeyperson \$ 27.68

OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

^{**}For total cost of Sheetmetal contract only.

^{*}To be allocated at a later date.

^{*}Plus 3% of hourly wage paid. The 3% is based on the hourly wage paid, straight time or premium rate.

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 \$ 18.30	2nd \$ 20.34	3rd \$ 22.12	4th \$ 24.15	5th \$ 26.19	6th \$ 28.22	7th \$ 30.25	8th \$ 32.29	9th \$ 34.32	10th \$ 36.35
Supplementa	Benefits per	hour							
1st \$ 8.37	2nd \$ 8.37	3rd \$ 19.76	4th \$ 19.76	5th \$ 20.01	6th \$ 20.01	7th \$ 20.01	8th \$ 20.01	9th \$ 20.01	10th \$ 20.01 1-669

Teamster - Building 08/01/2022

JOB DESCRIPTION Teamster - Building

DISTRICT 6

ENTIRE COUNTIES

Broome, Cayuga, Cortland, Delaware, Onondaga, Seneca, Tompkins, Yates

PARTIAL COUNTIES

Allegany: Only the Townships of Almond, Burns, and Alfred. Chenango: Only the Townships of Afton, Bainbridge, Coventry, Greene, Guilford, Oxford and Smithville. Madison: Only the Townships of Cazenovia, DeRuyter, Fenner, Georgetown, Lenox, Nelson and Sullivan.

Oswego: All Townships except Redfield, Boylston and Sandy Creek.
Otsego: Only the Townships of Butternuts, Laurens, Maryland, Millford, Morris, Oneonta, Otego, Unadilla, and Worchester.

Steuben: Only the Townships of Prattsburg, Canisteo, Fremont, Cohoctan, Dansville, Hornell, Hartsville, Greenwood, West Union,

Troupsburg, and Jasper.

Tioga: Only the Townships of Berkshire, Candor, Newark Valley, Nichols, Owego, Richford, and Tioga. All territory east of Nichols/Smithboro to Broome County, within State of New York.

WAGES

GROUP A: Straight Trucks

GROUP B: Tractor Trailer, Farm Tractor, Fuel Truck.

GROUP C: Euclid.

GROUP D: On site Mechanic.

Per hour:	07/01/2022
Building: (under \$ 5 million*) GROUP A GROUP B GROUP C GROUP D	\$ 24.43 24.43 24.43 24.43
Building: (over \$ 5 million*) GROUP A GROUP B GROUP C GROUP D	\$ 25.48 25.58 25.83 25.63

^{*} Total project cost including General Construction, Plumbing, HVAC and Electrical

SUPPLEMENTAL BENEFITS

Per hour:

(under \$5 million*) \$ 28.63 29.37 (over \$5 million*)

OVERTIME PAY

(D, O) on OVERTIME PAGE

HOLIDAY

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

^{*} Total project cost including General Construction, Plumbing, HVAC and Electrical

DISTRICT 6

6-317

Teamster - Heavy&Highway

08/01/2022

JOB DESCRIPTION Teamster - Heavy&Highway

ENTIRE COUNTIES

Onondaga

PARTIAL COUNTIES

Madison: Only the Townships of Cazenovia, DeRuyter, Fenner, Georgetown, Lenox, Nelson and Sullivan.

Oswego: All Townships except Redfield, Sandy Creek and Boylston

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 and Parts Chasers. Tandems and Batch Trucks, Mechanics, Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks and Agitator, Mixer Trucks and Dumpcrete type vehicles, Truck Mechanic, Fuel Trucks.

GROUP 2:

Specialized Earth Moving Equipment-Euclid type, or similar off-highway equipment, where not self-loading, Straddle (Ross) Carrier and self-contained concrete mobile unit, Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

Per hour:	07/01/2022	07/01/2023	07/01/2024
GROUP 1	\$ 29.95	\$ 31.80	\$ 33.79
GROUP 2	30.15	32.00	33.99

NOTE: For all work bid, there shall be a twelve month carryover of the rates in effect at the time of the bid.

Additional \$ 1.50 per hour on City, County, Federal and/or State designated hazardous waste site when personal protection is required by regulation to be used or worn.

SUPPLEMENTAL BENEFITS

Per hour: 07/01/2022 07/01/2023 07/01/2024

Journeyman: \$ 27.12 \$ 27.77 \$ 28.28

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. Any work performed on the Monday in which the holiday is celebrated shall be payable at triple time.

6-317h

Welder 08/01/2022

JOB DESCRIPTION Welder

DISTRICT 1

ENTIRE COUNTIES

Albany, Allegany, Bronx, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Chenango, Clinton, Columbia, Cortland, Delaware, Dutchess, Erie, Essex, Franklin, Fulton, Genesee, Greene, Hamilton, Herkimer, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Nassau, New York, Niagara, Oneida, Onondaga, Ontario, Orange, Orleans, Oswego, Otsego, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Schuyler, Seneca, St. Lawrence, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Wayne, Westchester, Wyoming, Yates

WAGES

Per hour 07/01/2022

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

^{*}NOTE: Applies when a temporary warehouse structure is built/utilized specifically for a public work project.

Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

(AA)	Time and one half of the hourly rate after 7 and one half hours per day
(A)	Time and one half of the hourly rate after 7 hours per day
(B)	Time and one half of the hourly rate after 8 hours per day
(B1)	Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday. Double the hourly rate for all additional hours
(B2)	Time and one half of the hourly rate after 40 hours per week
(C)	Double the hourly rate after 7 hours per day
(C1)	Double the hourly rate after 7 and one half hours per day
(D)	Double the hourly rate after 8 hours per day
(D1)	Double the hourly rate after 9 hours per day
(E)	Time and one half of the hourly rate on Saturday
(E1)	Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
(E2)	Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
(E3)	Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
(E4)	Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
(E5)	Double time after 8 hours on Saturdays
(F)	Time and one half of the hourly rate on Saturday and Sunday
(G)	Time and one half of the hourly rate on Saturday and Holidays
(H)	Time and one half of the hourly rate on Saturday, Sunday, and Holidays
(1)	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.)

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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 12240

REQUEST FOR WAGE AND SUPPLEMENT INFORMATION

As Required by Articles 8 and 9 of the NYS Labor Law

 $Fax\ (518)\ 485\text{--}1870\ \text{or mail this form for new schedules or for determination for additional occupations}.$

This Form Must Be Typed

Submitted By: (Check Only One) Contracting Agency Architect or Engineering	ing Firm Public Work District Office Date:	
A. Public Work Contract to be let by: (Enter Data Pertaining to	to Contracting/Public Agency)	
1. Name and complete address	2. NY State Units (see Item 5)	ict, i.e., Distric
E-Mail: 3. SEND REPLY TO check if new or change) Name and complete address:	4. SERVICE REQUIRED. Check appropriate box and provide project information. New Schedule of Wages and Supplements. APPROXIMATE BID DATE: Additional Occupation and/or Redetermination	
Telephone:() Fax: () E-Mail:	PRC NUMBER ISSUED PREVIOUSLY FOR THIS PROJECT :	NLY
B. PROJECT PARTICULARS		
5. Project Title Description of Work Contract Identification Number	6. Location of Project: Location on Site Route No/Street Address Village or City Town	
Note: For NYS units, the OSC Contract No.	County	
7. Nature of Project - Check One: 1. New Building 2. Addition to Existing Structure 3. Heavy and Highway Construction (New and Repair) 4. New Sewer or Waterline 5. Other New Construction (Explain) 6. Other Reconstruction, Maintenance, Repair or Alteration 7. Demolition 8. Building Service Contract	8. OCCUPATION FOR PROJECT : Construction (Building, Heavy Highway/Sewer/Water) Tunnel Residential Landscape Maintenance Elevator maintenance Exterminators, Fumigators Fire Safety Director, NYC Only Guards, Watchmen Janitors, Porters, Cle Elevator Operators Moving furniture and equipment Trash and refuse ren Window cleaners Other (Describe)	i
9. Has this project been reviewed for compliance with the W	/icks 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.

<u>Debarment Database:</u> 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, <u>or</u> under NYS Workers' Compensation Law Section 141-b, access the database at this link: https://applications.labor.ny.gov/EDList/searchPage.do

For inquiries where WCB is listed as the "Agency", please call 1-866-546-9322

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	****4018	ADIRONDACK BUILDING RESTORATION INC.		4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	AG	****1812	ADVANCED BUILDERS & LAND DEVELOPMENT, INC.		400 OSER AVE #2300HAUPPAUGE NY 11788	09/11/2019	09/11/2024
DOL	DOL	****1687	ADVANCED SAFETY SPRINKLER INC		261 MILL ROAD P.O BOX 296EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	NYC	****6775	ADVENTURE MASONRY CORP.		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	NYC		AGOSTINHO TOME		405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
DOL	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL		ANGELO GARCIA		515 WEST AVE UNIT PH 13NORWALK CT 06850	05/12/2021	05/12/2026
DOL	DOL		ANITA SALERNO		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	DOL		ANTONIO ESTIVEZ		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	NYC		ARADCO CONSTRUCTION CORP		115-46 132RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL		ARNOLD A. PAOLINI		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC		ARSHAD MEHMOOD		168-42 88TH AVENUE JAMAICA NY 11432	11/20/2019	11/20/2024
DOL	NYC	*****6683	ATLAS RESTORATION CORP.		35-12 19TH AVENUE ASTORIA NY 11105	08/02/2017	08/02/2022
DOL	NYC	****2591	AVI 212 INC.		260 CROPSEY AVENUE APT 11GBROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	NYC		AVM CONSTRUCTION CORP		117-72 123RD ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	****8421	B & B DRYWALL, INC		206 WARREN AVE APT 1WHITE PLAINS NY 10603	12/14/2021	12/14/2026
DOL	NYC		BALWINDER SINGH		421 HUDSON ST SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	NYC	****8416	BEAM CONSTRUCTION, INC.		50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	DOL		BERNARD BEGLEY		38 LONG RIDGE ROAD BEDFORD NY 10506	12/18/2019	12/18/2024
DOL	NYC	****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		BIAGIO CANTISANI			06/12/2018	06/12/2023
DOL	DOL	****3627	BJB CONSTRUCTION CORP.		38 LONG RIDGE ROAD BEDFORD NY 10506	12/18/2019	12/18/2024
DOL	DOL	****4512	BOB BRUNO EXCAVATING, INC		5 MORNINGSIDE DR AUBURN NY 13021	05/28/2019	05/28/2024
DOL	DOL		BOGDAN MARKOVSKI		370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601	02/11/2019	02/11/2024
DOL	DOL		BRADLEY J SCHUKA		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL		BRUCE P. NASH JR.		5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	DOL	*****0225	C&D LAFACE CONSTRUCTION, INC.		8531 OSWEGO RD BALDWINSVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	****4083	C.P.D. ENTERPRISES, INC		P.O BOX 281 WALDEN NY 12586	03/03/2020	03/03/2025

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	NYC		CALVIN WALTERS		465 EAST THIRD ST MT. VERNON NY 10550	09/09/2019	09/09/2024
DOL	DOL		CANTISANI & ASSOCIATES LTD		442 ARMONK RD MOUNT KISCSO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CANTISANI HOLDING LLC			06/12/2018	06/12/2023
DOL	DOL		CARMEN RACHETTA		8531 OSWEGO RD BALDWINSVILLE NY 13027	02/03/2020	02/03/2025
DOL	DOL		CARMENA RACHETTA		8531 OSWEGO ROAD BALDWINSVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****3812	CARMODY "2" INC			06/12/2018	06/12/2023
DOL	DOL	****1143	CARMODY BUILDING CORP	CARMODY CONTRACTIN G AND CARMODY CONTRACTIN G CORP.	442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY CONCRETE CORPORATION			06/12/2018	06/12/2023
DOL	DOL		CARMODY ENTERPRISES, LTD.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY INC		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****3812	CARMODY INDUSTRIES INC			06/12/2018	06/12/2023
DOL	DOL		CARMODY MAINTENANCE CORPORATION		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY MASONRY CORP		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	AG	****7247	CENTURY CONCRETE CORP		2375 RAYNOR ST RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	AG		CESAR J. AGUDELO		81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	DOL	****0026	CHANTICLEER CONSTRUCTION LLC		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	NYC		CHARLES ZAHRADKA		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL		CHRISTOPHER J MAINI		19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL		CHRISTOPHER PAPASTEFANOU A/K/A CHRIS PAPASTEFANOU		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL	****1927	CONSTRUCTION PARTS WAREHOUSE, INC.	CPW	5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	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
DOL	DOL	****2524	CSI ELECTRICAL & MECHANICAL INC		42-32 235TH ST DOUGLASTON NY 11363	01/14/2019	01/14/2024
DOL	NYC		DALJIT KAUR BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL	****7619	DANCO CONSTRUCTION UNLIMITED INC.		485 RAFT AVENUE HOLBROOK NY 11741	10/19/2021	10/19/2026
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	NYC		DAVID WEINER		14 NEW DROP LANE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	AG		DEBRA MARTINEZ		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL		DELPHI PAINTING & DECORATING CO INC		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	NYC		DIMITRIOS TSOUMAS		35-12 19TH AVENUE ASTORIA NY 11105	08/02/2017	08/02/2022
DOL	DOL		DOMENICO LAFACE		8531 OSWEGO RD BALDWINSVILLE NY 13027	02/03/2020	01/09/2023

DOL	DOL	****5175	EAGLE MECHANICAL AND GENERAL CONSTRUCTION LLC		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL		EAST COAST PAVING		2238 BAKER RD GILLETT PA 16923	03/12/2018	03/12/2023
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	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	NYC	****5917	EPOCH ELECTRICAL, INC		97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2024
DOL	DOL		FAIGY LOWINGER		11 MOUNTAIN RD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL		FRANK BENEDETTO		19 CATLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL	****4722	FRANK BENEDETTO AND CHRISTOPHER J MAINI	B & M CONCRETE	19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	NYC		FRANK MAINI		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
DOL	DA		FREDERICK HUTZLER		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	NYC	*****6616	G & G MECHANICAL ENTERPRISES, LLC.		1936 HEMPSTEAD TURNPIKE EAST MEDOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		GABRIEL FRASSETTI			04/10/2019	04/10/2024
DOL	NYC		GAYATRI MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DOL		GEOFF CORLETT		415 FLAGGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DOL		GIGI SCHNECKENBURGER		261 MILL RD EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	DOL		GIOVANNI LAFACE		8531 OSWEGO RD BALDWINSVILLE NY 13027	02/03/2020	01/09/2023
DOL	NYC	****3164	GLOBE GATES INC	GLOBAL OVERHEAD DOORS	405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
DOL	NYC		GREAT ESTATE CONSTRUCTION, INC.		327 STAGG ST BROOKLYN NY 11206	10/10/2017	10/10/2022
DOL	DOL		GREGORY S. OLSON		P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		HANS RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC	*****3228	HEIGHTS ELEVATOR CORP.		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
DOL	DOL	****5131	INTEGRITY MASONRY, INC.	M&R CONCRETE	722 8TH AVE WATERVLIET NY 12189	06/05/2018	06/05/2023
DOL	DOL		IRENE KASELIS		32 PENNINGTON AVE WALDWICK NJ 07463	05/30/2019	05/30/2024
DOL	DOL	*****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		J.A. HIRES CADWALLADER		P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		JAMES C. DELGIACCO		722 8TH AVE WATERVLIET NY 12189	06/05/2018	06/05/2023
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		JAMES LIACONE		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		JAMES RACHEL		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		JASON 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	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	****5368	JCH MASONRY & LANDSCAPING INC.		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023
DOL	NYC		JENNIFER GUERRERO		1936 HEMPSTEAD TURNPIKE EAST MEADOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
DOL	AG		JOHN ANTHONY MASSINO		36-49 204TH STREET BAYSIDE NY 11372	02/07/2018	02/07/2023
DOL	DOL		JOHN F. CADWALLADER		200 LATTA BROOK PARK HORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL	****4612	JOHN F. CADWALLADER, INC.	THE GLASS COMPANY	P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		JOHN GOCEK		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL		JOHN LUCIANO			05/14/2018	05/14/2023
DOL	DOL		JOHN MARKOVIC		47 MANDON TERRACE HAWTHORN NJ 07506	03/29/2021	03/29/2026
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	AG	****0600	JOHNCO CONTRACTING, INC.		36-49 204TH STREET BAYSIDE NY 11372	02/07/2018	02/07/2023
DOL	DOL		JON E DEYOUNG		261 MILL RD P.O BOX 296EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DOL		JORI PEDERSEN		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DOL		JOSE CHUCHUCA		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023
DOL	NYC		JOSEPH MARTINO		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	DOL		JOY MARTIN		2404 DELAWARE AVE NIGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL	****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	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		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KATIE BURDICK		2238 BAKER RD GILLETT PA 16923	03/12/2018	03/12/2023
DOL	DOL	****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	****3490	L & M CONSTRUCTION/DRYWALL INC.		1079 YONKERS AVE YONKERS NY 10704	08/07/2018	08/07/2023
DOL	DA	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		LAVERN GLAVE		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	06/24/2016	09/19/2022
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	06/24/2016	09/19/2022
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022

DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC	PO BOX 10007 ALBANY NY 12201	01/17/2017	09/19/2022
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC	PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC	PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	****4388	LEN.J CONSTRUCTION, LLC	PO BOX 10007 ALBANY NY 12201	08/14/2017	09/19/2022
DOL	DOL		LEROY NELSON JR	PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR	PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR	PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR	PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR	PO BOX 10007 ALBANY NY 12201	08/14/2017	08/14/2022
DOL	DOL		LEROY NELSON JR	PO BOX 10007 ALBANY NY 12201	01/17/2017	09/19/2022
DOL	AG	*****3291	LINTECH ELECTRIC, INC.	3006 TILDEN AVE BROOKLYN NY 11226	02/16/2022	02/16/2027
DOL	DA	****4460	LONG ISLAND GLASS & STOREFRONTS, LLC	4 MANHASSET TRL RIDGE NY 11961	09/06/2018	09/06/2023
DOL	AG	****4216	LOTUS-C CORP.	81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	DOL		LOUIS A. CALICCHIA	1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	NYC		LUBOMIR PETER SVOBODA	27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	NYC		M & L STEEL & ORNAMENTAL IRON CORP.	27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
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	NYC		MAREK FABIJANOWSKI	50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	NYC		MARIA NUBILE	84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	DOL		MASONRY CONSTRUCTION, INC.	442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****3333	MASONRY INDUSTRIES, INC.	442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	NYC		MATINA KARAGIANNIS	97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2023
DOL	DOL		MATTHEW P. KILGORE	4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	DOL		MAURICE GAWENO	442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		MICHAEL LENIHAN	1079 YONKERS AVE UNIT 4YONKERS NY 10704	08/07/2018	08/07/2023
DOL	AG		MICHAEL RIGLIETTI	31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL	****4829	MILESTONE ENVIRONMENTAL CORPORATION	704 GINESI DRIVE SUITE 29MORGANVILLE NJ 07751	04/10/2019	04/10/2024
DOL	NYC	****9926	MILLENNIUM FIRE PROTECTION, LLC	325 W. 38TH STREET SUITE 204NEW YORK NY 10018	11/14/2019	11/14/2024
DOL	NYC	****0627	MILLENNIUM FIRE SERVICES, LLC	14 NEW DROP LNE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	AG		MSR ELECTRICAL CONSTRUCTION CORP.	31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	NYC		MUHAMMED A. HASHEM	524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC		NAMOW, INC.	84-22 GRAND AVENUE ELMHURST NY 11373	03/10/2020	03/10/2025
DOL	DA	****9786	NATIONAL INSULATION & GC CORP	180 MILLER PLACE HICKSVILLE NY 11801	12/12/2018	12/12/2023

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DOL	DOL	****3684	NATIONAL LAWN SPRINKLERS, INC.		645 N BROADWAY WHITE PLAINS NY 10603	05/14/2018	05/14/2023
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	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	****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTI ON, INC.	444 SCHANTZ ROAD ALLENTOWN PA 18104	09/17/2020	09/17/2025
DOL	DOL	*****1845	OC ERECTERS, LLC A/K/A OC ERECTERS OF NY INC.		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	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	*****0466	PRECISION BUILT FENCES, INC.		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****1068	RATH MECHANICAL CONTRACTORS, INC.		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL	****2633	RAW POWER ELECTRIC CORP		3 PARK CIRCLE MIDDLETOWN NY 10940	01/30/2018	01/30/2023
DOL	AG	****7015	RCM PAINTING INC.		69-06 GRAND AVENUE 2ND FLOORMASPETH NY 11378	02/07/2018	02/07/2023
DOL	DA	****7559	REGAL CONTRACTING INC.		24 WOODBINE AVE NORTHPORT NY 11768	10/01/2020	10/01/2025
DOL	DOL		REGINALD WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL	*****9148	RICH T CONSTRUCTION		107 WILLOW WOOD LANE CAMILLUS NY 13031	11/13/2018	11/13/2023
DOL	DOL		RICHARD MACONE		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023
DOL	DOL		RICHARD REGGIO		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	DOL	****9148	RICHARD TIMIAN	RICH T CONSTRUCTI ON	108 LAMONT AVE SYRACUSE NY 13209	10/16/2018	10/16/2023
DOL	DOL		RICHARD TIMIAN JR.		108 LAMONT AVE SYRACUSE NY 13209	10/16/2018	10/16/2023
DOL	DOL		RICHARD TIMIAN JR.		108 LAMONT AVE SYRACUSE NY 13209	11/13/2018	11/13/2023
DOL	DOL		ROBBYE BISSESAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROBERT A. VALERINO		3841 LANYARD COURT NEW PORT RICHEY FL 34652	07/09/2019	07/09/2024
DOL	DOL		ROBERT BRUNO		5 MORNINGSIDE DRIVE AUBURN NY 13021	05/28/2019	05/28/2024
DOL	DOL		RODERICK PUGH		404 OAK ST SUITE 101SYRACUSE NY 13203	07/23/2018	07/23/2023
DOL	DOL	****4880	RODERICK PUGH CONSTRUCTION INC.		404 OAK ST SUITE 101SYRACUSE NY 13203	07/23/2018	07/23/2023
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL		RONALD MESSEN		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL		ROSEANNE CANTISANI			06/12/2018	06/12/2023
DOL	DOL	*****1365	S & L PAINTING, INC.		11 MOUNTAIN ROAD P.O BOX 408MONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL	****7730	S C MARTIN GROUP INC.		2404 DELAWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	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

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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	NYC	****0349	SAM WATERPROOFING INC		168-42 88TH AVENUE APT.1 AJAMAICA NY 11432	11/20/2019	11/20/2024
DOL	NYC		SANDEEP BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	NYC	****1130	SCANA CONSTRUCTION CORP.		863 WASHINGTON STREET FRANKLIN SQUARE NY 11010	03/10/2020	03/10/2025
DOL	DOL	****2045	SCOTT DUFFIE	DUFFIE'S ELECTRIC, INC.	P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	DOL		SCOTT DUFFIE		P.O BOX 111 CORNWALL NY 12518	03/03/2020	03/03/2025
DOL	NYC	****6597	SHAIRA CONSTRUCTION CORP.		421 HUDSON STREET SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	DOL	*****1961	SHANE BURDICK	CENTRAL TRAFFIC CONTROL, LLC.	2238 BAKER ROAD GILLETT PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE BURDICK		2238 BAKER ROAD GILLETT PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE NOLAN		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		SHULEM LOWINGER		11 MOUNTAIN ROAD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL	*****0816	SOLAR ARRAY SOLUTIONS, LLC		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL	*****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	NYC		SOMATIE RAMSUNAHAI		115-46 132ND ST SOUTH OZONE PARK NY 11420	09/17/2020	09/17/2025
DOL	DOL	*****2221	SOUTH BUFFALO ELECTRIC, INC.		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	DOL	*****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	****6844	STEAM PLANT AND CHX SYSTEMS INC.		14B COMMERCIAL AVENUE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL	*****9933	STEED GENERAL CONTRACTORS, INC.		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL	****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		STEFANOS PAPASTEFANOU, JR. A/K/A STEVE PAPASTEFANOU, JR.		256 WEST SADDLE RIVER RD UPPER SADDLE RIVER NJ 07458	05/30/2019	05/30/2024
DOL	DOL		STEVE TATE		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DOL		STEVEN MARTIN		2404 DELWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL	****3800	SUBURBAN RESTORATION CO. INC.		5-10 BANTA PLACE FAIR LAWN PLACE NJ 07410	03/29/2021	03/29/2026
DOL	NYC	****5863	SUKHMANY CONSTRUCTION, INC.		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL	****1060	SUNN ENTERPRISES GROUP, LLC		370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601	02/11/2019	02/11/2024
DOL	DOL	****8209	SYRACUSE SCALES, INC.		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	DOL		TALAILA OCAMPA		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	DOL		TERRY THOMPSON		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
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

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DOL	DOL		TERSAL DEVELOPMENT CORP.		1935 TEALL AVENUE SYRACUSE NY 13206	07/16/2021	07/16/2026
DOL	DOL		TEST		P.O BOX 123 ALBANY NY 12204	05/20/2020	05/20/2025
DOL	DOL	****6789	TEST1000		P.O BOX 123 ALBANY NY 12044	03/01/2021	03/01/2026
DOL	DOL	****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DA	****4106	TRIPLE H CONCRETE CORP		2375 RAYNOR STREET RONKONKOMA NY 11779	08/04/2021	08/04/2026
DOL	DOL	****6392	V.M.K CORP.		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023
DOL	DOL	*****6418	VALHALLA CONSTRUCTION, LLC.		796 PHLEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	****2426	VICKRAM MANGRU	VICK CONSTRUCTI ON	21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	NYC		VICKRAM MANGRU		21 DAREWOOD LANE VALLEY STREAM NY 11581	09/17/2020	09/17/2025
DOL	DOL		VICTOR ALICANTI		42-32 235TH ST DOUGLASTON NY 11363	01/14/2019	01/14/2024
DOL	NYC		VIKTAR PATONICH		2630 CROPSEY AVE BROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	DOL		VIKTORIA RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC		VITO GARGANO		1535 RICHMOND AVE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	NYC	****3673	WALTERS AND WALTERS, INC.		465 EAST AND THIRD ST MT. VERNON NY 10550	09/09/2019	09/09/2024
DOL	DOL	****3296	WESTERN NEW YORK CONTRACTORS, INC.		3841 LAYNARD COURT NEW PORT RICHEY FL 34652	07/09/2019	07/09/2024
DOL	DOL		WHITE PLAINS CARPENTRY CORP		442 ARMONK RD	06/12/2018	06/12/2023
DOL	DOL		WILLIAM 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	****4043	WINDSHIELD INSTALLATION NETWORK, INC.		200 LATTA BROOK PARK HORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL	****4730	XGD SYSTEMS, LLC	TDI GOLF	415 GLAGE AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	NYC		ZAKIR NASEEM		30 MEADOW ST BROOKLYN NY 11206	10/10/2017	10/10/2022
DOL	NYC	****8277	ZHN CONTRACTING CORP		30 MEADOW ST BROOKLYN NY 11206	10/10/2017	10/10/2022

Contract Documents and Technical Specifications

Onondaga County Resource Recovery Agency Rock Cut Road Transfer Station Building 2 Optimization – Phase II

AUGUST 2022

PRESENTED TO

Onondaga County Resource Recovery Agency 100 Elwood Davis Road North Syracuse, NY 13212-4312

SUBMITTED BY

Cornerstone Engineering and Geology, PLLC 100 Crystal Run Road, Suite 101 Middletown, NY 10941 P +1.877.294.9070 F +1.877.845.1456 tetratech.com

REPORT CERTIFICATION

Technical Specifications (Divisions 01 & 11)

Onondaga County Resource Recovery Agency Rock Cut Road Transfer Station Building 2 Optimization – Phase II Jamesville, New York 13078

These Technical Specifications were prepared under the supervision and direction of the undersigned, whose seal as a registered professional engineer is affixed below.

Cornerstone Engineering and Geology, PLLC

Robert A. Holmes, P.E.

N.Y.P.E. License No. 077317

REPORT CERTIFICATION

Technical Specifications (Divisions 02 & 05)

Onondaga County Resource Recovery Agency Rock Cut Road Transfer Station Building 2 Optimization – Phase II Jamesville, New York 13078

These Technical Specifications were prepared under the supervision and direction of the undersigned, whose seal as a registered professional engineer is affixed below.

E.D. Pons Associates, P.C.

Vincent A. Griffin, P.E.

N.Y.P.E. License No. 096942-1

Technical Specifications (Divisions 07 & 08)

Onondaga County Resource Recovery Agency Rock Cut Road Transfer Station Building 2 Optimization – Phase II Jamesville, New York 13078

These Technical Specifications were prepared under the supervision and direction of the undersigned, whose seal as a registered professional engineer is affixed below.

Anderson Design Group

Jason T. Anderson, R.A. N.Y. License No. 033127

REPORT CERTIFICATION

Technical Specifications (Divisions 21, 22, & 26)

Onondaga County Resource Recovery Agency Rock Cut Road Transfer Station Building 2 Optimization – Phase II Jamesville, New York 13078

These Technical Specifications were prepared under the supervision and direction of the undersigned, whose seal as a registered professional engineer is affixed below.

Gerard Associates Consulting Engineers, P.C.

Gerard S. Hluchan, P.E.

N.Y.P.E. License No. 069684

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01 50 00	Temporary Facilities and Controls
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1.0 LIMITATIONS

The work product included in the attached was undertaken in full conformity with generally accepted professional consulting principles and practices and to the fullest extent as allowed by law we expressly disclaim all warranties, express or implied, including warranties of merchantability or fitness for a particular purpose. The work product was completed in full conformity with the contract with our client and this document is solely for the use and reliance of our client and the New York State Department of Environmental Conservation (unless previously agreed upon that a third party could rely on the work product) and any reliance on this work product by an unapproved outside party is at such party's risk.

The work product herein (*including opinions, conclusions, suggestions, etc.*) was prepared based on the situations and circumstances as found at the time, location, scope and goal of our performance and thus should be relied upon and used by our client and the New York State Department of Environmental Conservation recognizing these considerations and limitations. Cornerstone shall not be liable for the consequences of any change in environmental standards, practices, or regulations following the completion of our work and there is no warrant to the veracity of information provided by third parties, or the partial utilization of this work product.

DIVISION 01 – GENERAL REQUIREMENTS

SECTION 01 10 00

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contract Description.
- B. Bid Alternates.
- C. Owner-Furnished Products.
- D. Work by Owner.
- E. Contractor's Use of Site and Premises.
- F. Supervision by Contractor.
- G. Permits.
- H. Involved Agencies.
- I. Weekend or Night Work.
- J. Maintenance of Traffic.
- K. Specification Conventions.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 20 00 Price and Payment Procedures
- D. Section 01 30 00 Administrative Requirements
- E. Section 01 50 00 Temporary Facilities and Controls
- F. Section 01 90 00 Reference Standards

1.3 CONTRACT DESCRIPTION

A. The Work is identified on the Construction Plans and in the Technical Specifications.

- B. It is the intent of the Construction Plans and Technical Specifications to provide alterations and/or new construction as indicated to provide complete systems in every respect, capable of operating as designed. It is not intended that every fitting, minor detail or feature be shown on Construction Plans or detailed within the Technical Specifications. The Contractor shall be responsible for any additional detail necessary for completion of these systems in accordance with good practice. Installation shall be executed so as to contribute to efficiency of operation, proper and safe functioning of the construction and its equipment, minimum maintenance, accessibility, and sightliness. The requirements specified herein shall govern applicable portions of all Sections whether so stated herein or not.
- C. Comply with applicable regulatory requirements and various codes. Where conflicts exist between local, State, and/or Federal regulatory requirements, codes, or these Technical Specifications, Contractor shall advise the Architect-Engineer or Owner. The Architect-Engineer will assist in resolving the conflicts to the satisfaction of the regulatory agencies prior to commencing the Work.
- D. All Work shall comply with OSHA and PESH (site specific safety plans required), the New York State Uniform Fire Prevention and Building Code (the "Uniform Code"), which includes the current editions, Part 1221 (Building Code), Part 1222 (Plumbing Code), Part 1223 (Mechanical Code), Part 1224 (Fuel Gas Code), Part 1225 (Fire Code), Part 1226 (Property Maintenance Code), Part 1227 (Existing Building Code), and Part 1240 (New York State Energy Conservation).
- E. The Contractor shall be advised that where noted, the use of a brand name is for the purpose of describing the standard of quality, performance and characteristics desired and is in no way intended to limit or restrict competition.
- F. The Contractor shall furnish all material, labor, equipment, incidentals, and appurtenances required to perform the work under the Contract for construction of Rock Cut Road Transfer Station Building 2 Optimization Phase II including, but not limited to, the following:

CONTRACT NO. 1 – General Transfer Station Building 2 Optimization – Phase II

Division 01 – General Requirements

• General Conditions, including supervision and management, ongoing project related expenses such as site health and safety, utilities, dust control, bonds and insurances, obtaining necessary permits and compliance with any and all requirements of regulatory agencies and utility companies pertaining to the Work, and any other item not covered in the other paragraphs of this Section.

- Mobilization and Demobilization of all parts, material, and equipment to and from the Site that are necessary to complete the Work, as well as connection and disconnection of Contractor-provided utilities, Facility restoration, and final Facility cleaning.
- Temporary Facilities and Controls, including Contractor's facilities, furnishings, and their related expenses, etc.; vehicles and related maintenance including supplies such as fuel; temporary services; preparation and submission of Submittals, Shop Drawings, and operations and maintenance manuals, etc.; protection of existing facilities to remain; protection of completed work; and any other requirements as identified and described in Section 01 50 00 Temporary Facilities and Controls.
- Planning and Coordination of Third Party Quality Assurance services (testing/inspection) by a certified, independent testing laboratory and/or inspection service to perform specified testing and inspection as required by the Construction Plans, Technical Specifications, and permits. Third Party Quality Assurance service will perform tests, inspections, Special Inspections required by code, and other services specified in individual Technical Specification sections and as required by Architect-Engineer, Owner, and Authorities Having Jurisdiction.
- Establish all lines, elevations, and reference marks necessary to complete the Work and preparation of Record Drawings suitable for use by Architect-Engineer and Owner for Facility Certification with the NYSDEC and Authorities Having Jurisdiction, as required by the Contractor and Architect-Engineer during the progress of the Work, and from time to time to verify original construction stakeout and resetting of reference points for interim checks to allow accurate and satisfactory construction and completion of all Work in accordance with the requirements of the Construction Plans and Technical Specifications.

Record Drawings will be required as identified and described in Section 01 70 00 Execution and Closeout Requirements.

Division 02 – Existing Conditions

Provide all labor, materials, equipment, incidentals and appurtenances necessary to perform the demolition and removal of the existing Building 2 Loadout Knee Wall and Spill Shield and the Building 2 Basement Overhead Roll-up Door as required in accordance with the Construction Plans and Technical Specifications.

Division 05 – Metals

Provide all labor, materials, equipment, incidentals and appurtenances necessary to fabricate and install all Metals necessary including, but not limited to, the Building 2 Basement Overhead Roll-up Door and Framing, Building 2 Column Protection Plates and any other miscellaneous steel installations as required to complete the Work in accordance with the Construction Plans and Technical Specifications.

Division 07 – Thermal and Moisture Protection

Provide all labor, materials, equipment, incidentals and appurtenances necessary to install the Joint Sealants as required to complete the Work in accordance with the Construction Plans and Technical Specifications.

Division 08 – Openings

 Provide all labor, materials, equipment, incidentals and appurtenances necessary to install the Building 2 Basement Overhead Roll-up Door as required to complete the Work in accordance with the Construction Plans and Technical Specifications.

Division 11 – Facility Maintenance and Operation Equipment

Provide all labor, materials, equipment, incidentals and appurtenances necessary to install the Building 2 Loadout Pre-Engineered OSHA Compliant Non-penetrating Guardrail System and Safety Signage as required to complete the Work in accordance with the Construction Plans and Technical Specifications.

<u>CONTRACT NO. 2 – Plumbing & Fire Suppression Building 2 Optimization – Phase II</u>

Division 01 – General Requirements

- General Conditions, including supervision and management, ongoing project related expenses such as site health and safety, utilities, dust control, bonds and insurances, obtaining necessary permits and compliance with any and all requirements of regulatory agencies and utility companies pertaining to the Work, and any other item not covered in the other paragraphs of this Section.
- Mobilization and Demobilization of all parts, material, and equipment to and from the Site that are necessary to complete the Work, as well as connection and disconnection of Contractor-provided utilities, Facility restoration, and final Facility cleaning.
- Temporary Construction Facilities and Controls, including Contractor's facilities, furnishings, and their related expenses, etc.; vehicles and related maintenance including supplies such as fuel; temporary services; preparation and submission of Submittals, Shop Drawings, and operations and maintenance manuals, etc.; protection of existing facilities to remain; protection of completed work; and any other requirements as identified and described in Section 01 50 00 Temporary Facilities and Controls.
- Planning and Coordination of Third Party Quality Assurance services (testing/inspection) by a certified, independent testing and/or inspection service to perform required inspections for fire protection and plumbing, as required by the Construction Plans, Technical Specifications, and permits. Third Party Quality Assurance service will perform tests, inspections, Special Inspections required by code,

- and other services specified in individual Technical Specification sections and as required by Architect-Engineer, Owner, and Authorities Having Jurisdiction.
- Record Drawings will be required as identified and described in Section 01 70 00 Execution and Closeout Requirements.

Division 21 – Fire Suppression

Provide all labor, materials, equipment, incidentals, testing, and appurtenances necessary to remove the required existing components and install the Building 2/3 Fire Protection Modifications (including piping, hangers, and connections to existing piping system) equipment/safety, testing, and additional components as required to complete the Work in accordance with the Construction Plans and Technical Specifications.

Division 22 – Plumbing

Provide all labor, materials, equipment, incidentals, testing, and appurtenances necessary to install the Building 2/3 Plumbing Modifications (*including piping, hangers, fittings,* valves, hose reels and additional components) as required to complete the Work in accordance with the Construction Plans and Technical Specifications.

CONTRACT NO. 3 – Electrical Building 2 Optimization – Phase II

Division 01 – General Requirements

- General Conditions, including supervision and management, ongoing project related expenses such as site health and safety, utilities, dust control, bonds and insurances, obtaining necessary permits and compliance with any and all requirements of regulatory agencies and utility companies pertaining to the Work, and any other item not covered in the other paragraphs of this Section.
- Mobilization and Demobilization of all parts, material, and equipment to and from the Site that are necessary to complete the Work, as well as connection and disconnection of Contractor-provided utilities, Facility restoration, and final Facility cleaning.
- Temporary Construction Facilities and Controls, including Contractor's facilities, furnishings, and their related expenses, etc.; vehicles and related maintenance including supplies such as fuel; temporary services; preparation and submission of Submittals, Shop Drawings, and operations and maintenance manuals, etc.; protection of existing facilities to remain; protection of completed work; and any other requirements as identified and described in Section 01 50 00 Temporary Facilities and Controls.
- Payment, Planning, and Coordination of Third Party Quality Assurance services (testing/inspection) by a certified, independent testing and/or inspection service to perform required inspections for electrical, as required by the Construction Plans, Technical Specifications, and permits. Third Party Quality Assurance service will

perform tests, inspections, Special Inspections required by code, and other services specified in individual Technical Specification sections and as required by Architect-Engineer, Owner, and Authorities Having Jurisdiction.

• Record Drawings will be required as identified and described in Section 01 70 00 Execution and Closeout Requirements.

Division 26 – Electrical

- Provide all labor, materials, equipment, incidentals and appurtenances necessary to install the Building 2/3 Electrical Modifications (including conduit, wiring, hangers, supports, and appurtenances, temporary power, testing and troubleshooting, and additional components) as required to complete the Work in accordance with the Construction Plans and Technical Specifications.
- Place all facilities and equipment for functional operation, including all associated and necessary services.
- All fees, labor, material, and consultation from manufacturers and manufacturer's representatives during construction and during one (1) year warranty period shall be borne by Contractor as may be required to accomplish intent of Contract Documents and functional service thereof. Warranty period shall commence upon date of issuance of Final Payment.
- Confirm all existing utility locations and elevations prior to construction. Contractor is responsible for protecting all utilities and existing features during the course of construction.
- All Work shall be complete, tested, and proper operations demonstrated. Contractor shall present certificates of inspection as required to the Architect-Engineer for approval and demonstrate that installation and testing was performed in accordance with the Construction Plans, Technical Specifications, and applicable permits.
- The Work to be done shall include all Work shown on the Construction Plans and specified herein. All Work shall be in accordance with the Construction Plans and the requirements of the Technical Specifications and addenda (if any).
- The foregoing is a general description only and shall not be construed as a complete description of the Work to be performed. The Contractor is responsible for performing all Work required to complete the Work as detailed on the Construction Plans and Technical Specifications.
- All electrical Work shall be coordinated with the local utility and Owner.
- Temporary facilities and utilities shall be provided and maintained (*if required*) as indicated in Section 01 50 00.

• Provide a one (1) year warranty onto all parts and workmanship with no portal-to-portal charges for any warranty work performed.

1.4 BID ALTERNATES

A. None.

1.5 OWNER-FURNISHED PRODUCTS

A. None.

1.6 WORK BY OWNER

A. None.

1.7 CONTRACTOR'S USE OF SITE AND PREMISES

- A. The Contractor shall anticipate continued use of the Site and Facility to allow:
 - 1. Owner occupancy and continued operation of the existing Rock Cut Road Transfer Station within all areas outside of the Limit of Work.
 - 2. Work by Others.
 - 3. Access to and use of Rock Cut Road Transfer Station by the public within all areas outside of the Limit of Work.
- B. The Contractor's access to the Project area will be via Contractor Entrance and Contractor Exit. The Owner and the public will primarily utilize the Facility Entrance and Facility Exit. Regardless, due to the on-going occupancy and continued operation of the existing Rock Cut Road Transfer Station during the Work, the Contractor shall anticipate vehicular traffic outside the Limit of Work.
- C. The Contractor shall be aware the permitted hours of operation at the existing Rock Cut Road Transfer Station are as follows:
 - 1. Waste Acceptance:
 - a. Monday through Friday: 6:30 AM to 7:00 PM, Saturday: 8:00 AM to 12:00 Noon.
 - 2. Waste Operations:
 - a. Monday through Friday: 3:00 AM to 10:00 PM, Saturday: 7:00 AM to 2:00 PM.
 - 3. Sunday: Closed.

- D. Construction Operations: The Contractor shall confine Contractor's materials and their storage, and the operation of Contractor's workers to limits depicted within the Contract Documents, indicated by laws, ordinances permits, and directions of the Owner and/or Architect-Engineer, and will not unreasonably encumber the premises with such materials, but shall store them in orderly fashion so that they will not interfere with the Work under these Contract(s) or other contracts, or with the operation of the Rock Cut Road Transfer Station. The Contractor shall not load nor permit any part of the Work to be loaded with a weight that will endanger its safety or unduly affect the structure or any part thereof. The Contractor shall enforce the instructions of the Owner regarding signs, fires, and smoking.
- E. Contractor staging areas and stockpiles of material shall be coordinated by the Contractor and off-site areas reviewed, and on-site areas approved by the Owner.
- F. Neither the Contractor nor any of the Contractor's employees shall park any vehicle anywhere on the site, except at such locations as shown or as specifically approved by the Owner for the purpose.
- G. Construction Plan: Before start of construction, submit three (3) copies of the Construction Plan regarding access to Work, use of Site, staging and stockpile areas, and utility outages for acceptance by the Owner. After acceptance of the Plan, construction operations shall comply with accepted the Plan unless deviations are accepted by the Owner in writing.

1.8 SUPERVISION BY CONTRACTOR

- A. The Contractor shall supervise and direct the Work using best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, procedures, and safety precautions employed for the Work under the Contract.
- B. The Contractor shall employ at the Site during the performance of the Work or any part thereof, a competent superintendent or foreman who shall be satisfactory to the Owner and Architect-Engineer, and who shall not be replaced except with the written consent of the Owner and Architect-Engineer, unless the superintendent or foreman ceases to be an employee of the Contractor. Such superintendent or foreman shall represent and have full authority to act for their Contractor in his absence and all directions given to such superintendent or foreman shall be as binding as if given to the Contractor.

1.9 PERMITS

A. For Contracts No. 1 and 2 (*General and Plumbing & Fire Inspection*), Owner shall secure and pay for permits, inspections, and testing required for the construction elements included within the Contract as described within the Contract Documents. Contractor shall plan and coordinate all inspections required by State or local

Authorities having Jurisdiction, the Owner, or the Engineer and submit copies of the acceptance certificates to Owner prior to completion of the project. A minimum forty-eight (48) hour notice shall be provided to the inspector, Owner, and/or Engineer unless otherwise required by the inspector.

- B. For Contract No. 3 (*Electrical*), Owner shall secure and pay for permits required for the construction elements included within the Contract as described within the Contract Documents. Contractor shall secure and pay for inspections and testing required for the construction elements included within the Contract as described within the Contract Documents. Contractor shall plan and coordinate all inspections required by State or local Authorities having Jurisdiction, the Owner, or the Engineer and submit copies of the acceptance certificates to Owner prior to completion of the project. A minimum forty-eight (48) hour notice shall be provided to the inspector, Owner, and/or Engineer unless otherwise required by the inspector.
- C. The Contactor shall provide, to the satisfaction of the Owner and the Authorities Having Jurisdiction, copies of any tests, inspections, and subsequent Record Documents to support Owner procurement and closeout of any additional permits for the Work as required by the Authorities Having Jurisdiction. The Owner will provide the list of required tests, inspections, and subsequent Record Documents at the Site Mobilization Meeting as detailed within Section 01-30-00.
- D. The Owner has obtained the NYSDEC Permit for operation of Rock Cut Road Transfer Station. All construction is to be in accordance with the requirements of the NYSDEC Permit.

1.10 INVOLVED AGENCIES

- A. The following agencies shall be involved in the Work:
 - 1. Onondaga County Resource Recovery Agency (OCRRA).
 - 2. New York State Department of Environmental Conservation.
 - 3. Onondaga County Department of Emergency Management.
- B. Under Contract 3 Electrical the Contractor is required to obtain certification and approval for all electric services from a certified UL Underwriter to ensure that all Work has been constructed in accordance with all local, State, and Federal codes. In addition, all service connections shall be coordinated with the local utility provider.

1.11 WEEKEND OR NIGHT WORK

A. If it becomes necessary to perform Work at night or on Saturdays, Sundays or legal holidays, the Contractor shall submit written notice to the Owner at least ten (10) days in advance of the need for such Work and approval from the Owner and/or

Owner's Representative. Contractor shall provide personnel to monitor the Contractor and Facility Entrances and Exits. Work at night is subject to review by the Owner and is not guaranteed. If approved, Work at night may be subject to Owner provided conditions.

- B. The Contractor may be responsible for covering the costs of all personnel provided by the Owner and/or Owner's Representative.
- C. Good lighting and all other necessary facilities for carrying out and observing the Work shall be provided and maintained where such Work is being performed at night.
- D. Any extension of hours beyond an eight (8) hour day shall be subject to the Contractor recovery approval for the New York State Department of Labor.
- E. Weekend Work may be allowed, but is not guaranteed, by the Owner. Hours of operation will be established at the Pre-Construction Meeting.

1.12 MAINTENANCE OF TRAFFIC

- A. The Contractor shall use the Contractor Entrance and Exit, located off Rock Cut Road. The entrance is located approximately 1,000 feet east of Exit 1 off of the northbound lane of Interstate 481.
- B. The Contractor shall provide flagmen as necessary during the delivery or retrieval of construction equipment and materials at no additional cost to the Owner.

1.13 SPECIFICATION CONVENTIONS

A. These Technical Specifications are written in imperative mood and streamlined form. This imperative language is directed to Contractor unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Testing and Inspection.
- B. Schedule of Values.
- C. Application for Payment.
- D. Change Procedures.
- E. Defect Assessment.
- F. Alternates.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section.
- B. Division 00 Procurement and Contracting Requirements

1.3 TESTING AND INSPECTION

- A. Costs borne by the Contractor (*if applicable*) and to be included in Division 01 General Requirements, as summarized in Section 01 10 00 Summary of Work, and further detailed within the remainder of the Contract Documents:
 - 1. Cost of engaging testing and inspecting agency.
 - 2. Execution of tests and inspecting.
 - 3. Reporting results.
 - 4. Costs of incidental labor and facilities required to assist testing or inspecting agency.
 - 5. Costs of testing services used by Contractor separate from Contract Document requirements.
 - 6. Costs of retesting upon failure of previous tests as determined by Architect-Engineer.

1.4 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA G703 Continuation Sheet for G702.
- B. Submit Schedule of Values in duplicate within fifteen (15) days after date of commencement of Contract.
- C. Format: Use the line items from the Bid Form. Identify each line item with Item # consistent with Bid Form and Section 01 10 00 Summary of Work.
- D. Include in each line item the amount of allowances as specified in this Section.
- E. Revise Schedule of Values to list approved Change Orders with each Application for Payment.

1.5 APPLICATION FOR PAYMENT

- A. Submit one (1) original and two (2) copies of each of the following in accordance with requirements of Division 00 Procurement and Contracting Requirements, as applicable:
 - 1. Application for Payment on AIA G702.
 - 2. Continuation Sheet for G702 (*if required*).
 - 3. Application and Certificate for Payment on AIA G703.
 - 4. Certified payrolls.
- B. Content and Format: Use Schedule of Values for listing items in Application for Payment.
- C. Submit updated Construction Progress Schedule with each Application for Payment.
- D. Payment Period: Submit at intervals specified in Division 00 Procurement and Contracting Requirements.
- E. Submit Submittals with transmittal letter as specified in Section 01 33 00 Submittal Procedures.
- F. Substantiating Data: When Architect-Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
 - 1. Current construction photographs specified in Section 01 33 00 Submittal Procedures.

- 2. Partial release of liens from major Subcontractors and vendors.
- 3. Record Documents as specified in Section 01 70 00 Execution and Closeout Requirements, for review by Owner, which will be returned to Contractor.
- 4. Affidavits attesting to off-site stored products.
- 5. Construction Progress Schedule, revised and current as specified in Section 01 32 16 Construction Progress Schedule.

1.6 CHANGE PROCEDURES

- A. See Division 00 Procurement and Contracting Requirements
- B. Document requested substitutions according to Section 01 25 00 Substitution Procedures.

1.7 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements in accordance with Division 00 Procurement and Contracting Requirements.
- B. If, in the opinion of Architect-Engineer, it is not practical to remove and replace the Work, Architect-Engineer will direct appropriate remedy or adjust payment.
- C. Individual Technical Specifications Sections may modify these options or may identify specific formula or percentage sum/price reduction.
- D. Authority of Architect-Engineer and/or Owner to assess defects and identify payment adjustments is final.
- E. Payment will not be made for rejected products for any of the following reasons:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.

1.8 ALTERNATES

- A. Alternates quoted on Bid Form will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Contract. The Contract may identify certain Alternates to remain an Owner option for a stipulated period of time.
- B. Coordinate related Work and modify surrounding Work. Description for each Alternate is recognized to be abbreviated but requires that each change shall be complete for scope of Work affected.
 - 1. Coordinate related requirements among Technical Specifications Sections as required.
 - 2. Include as part of each Alternate: Miscellaneous devices, appurtenances, and similar items incidental to or necessary for complete installation.
 - 3. Coordinate Alternate with adjacent Work and modify or adjust as necessary to ensure integration.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality Assurance.
- B. Product Options.
- C. Product Substitution Procedures.
- D. Installer Substitution Procedures.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section.
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 20 00 Price and Payment Procedures
- D. Section 01 33 00 Submittal Procedures
- E. Section 01 40 00 Quality Requirements
- F. Section 01 60 00 Product Requirements
- G. Section 01 70 00 Execution and Closeout Requirements
- H. Section 01 90 00 Reference Standards

1.3 QUALITY ASSURANCE

- A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.
- B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.
- C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless substitution has been accepted and approved in writing by Owner and Architect-Engineer.

1.4 PRODUCT OPTIONS

A. See Section 01 60 00 - Product Requirements.

1.5 PRODUCT SUBSTITUTION PROCEDURES

- A. Contractor shall submit requests for substitutions in a timely manner to allow for appropriate review by the Architect-Engineer and Owner.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor; when another product is deemed to offer a performance advantage compared to the specified product; or when another product is deemed to offer equivalent performance to the specified product but at a savings in cost and/or schedule to the Owner.
- C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
 - 1. Reason for the proposed substitution.
 - 2. Manufacturer's name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
 - 3. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
 - 4. Reference to article and paragraph numbers in relevant Technical Specifications Section.
 - 5. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
 - 6. Changes required in other Work.
 - 7. Availability of maintenance service and source of replacement parts as applicable.
 - 8. Certified test data to show compliance with performance characteristics specified.
 - 9. Samples when applicable or requested.
 - 10. Other information as necessary to assist Architect-Engineer's evaluation.
- D. A request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product. The Contractor shall furnish in writing along with his request, a detailed comparison of the substituted product to the specified product

- showing the substituted product's ability to meet or exceed all performance criteria of the originally specified product.
- 2. Will provide same Warranty for Substitution as for specified product.
- 3. Will 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 relating to use of proposed product that may subsequently become apparent.
- 5. Will coordinate installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
- 6. Will reimburse Owner and Architect-Engineer for review or redesign services associated with reapproval by authorities having jurisdiction.
- E. Substitution will not be considered unless all conditions in Paragraphs C and D above are met and included within a Request for Substitution.
- F. 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 Contract Documents.
- G. Substitution Submittal procedure:
 - 1. Submit three (3) hard copies or one (1) electronically of Request for Substitution for consideration. Limit each request to one (1) proposed Substitution.
 - 2. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on the Contractor.
 - 3. Architect-Engineer will notify Contractor in writing of decision to accept or reject request.

1.6 INSTALLER SUBSTITUTION PROCEDURES

- A. Contractor shall submit Requests for Substitutions in a timely manner to allow for appropriate review by the Architect-Engineer.
- B. Document each request with:
 - 1. Reason for the proposed Substitution.
 - 2. Installer's qualifications.
 - 3. Installer's experience in Work similar to that specified.

4. Other information as necessary to assist Architect-Engineer's evaluation.

C. Substitution Submittal Procedure:

- 1. Submit three (3) hard copies or one (1) electronically of Request for Substitution for consideration. Limit each request to one (1) proposed substitution.
- 2. Architect-Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contractor Coordination and Project Conditions.
- B. Pre-construction Meeting.
- C. Site Mobilization Meeting.
- D. Construction Progress Meetings.
- E. Pre-installation Meetings.
- F. Closeout Meeting

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 70 00 Execution and Closeout Requirements

1.3 CONTRACTOR COORDINATION AND PROJECT CONDITIONS

- A. Contract Administrator: See Division 00 Procurement and Contracting Requirements.
- B. <u>Architect-Engineer</u>: See Division 00 Procurement and Contracting Requirements.
- C. Owner: Division 00 Procurement and Contracting Requirements.
- D. Coordinate Scheduling, Submittals, and Work of various Sections of Project to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- E. Verify that requirements and characteristics of installed equipment are compatible with utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing installed equipment in service.
- F. Coordinate space requirements, supports, sequence, and installation of site, structural, mechanical, electrical, and plumbing Work indicated diagrammatically on Construction Plans. Follow routing shown for pipes and conduit as closely as practical; place runs

parallel with lines of structures unless depicted otherwise. Use spaces efficiently to maximize accessibility for other installations (whether present or future), for maintenance, and for repairs.

- 1. Coordination Drawings: Prepare as required to coordinate all portions of Work. Show relationship and integration of different construction elements that require coordination during fabrication or installation to fit in space provided or to function as intended. Indicate locations where space is limited for installation and access and where sequencing and coordination of installations are important.
- G. Coordination Meetings: In addition to other meetings specified in this Section, hold Coordination Meetings with personnel and Subcontractors to ensure coordination of Work.
- H. Coordinate locations of signage, equipment, operators/switches, fixtures and outlets with Owner, Architect-Engineer, and Subcontractors to ensure robust, future operations as a solid waste transfer station and accommodation of finish elements.
- I. Coordinate completion and clean-up of Work of separate Sections in preparation for substantial completion and for portions of Work designated for Owner's partial occupancy and for portions of Work designated for Owner's occupancy.
- J. After Owner's occupancy of premises, coordinate access to Site for correction of defective Work and Work not complying with Contract Documents, to minimize disruption of Owner's activities.

1.4 PRE-CONSTRUCTION MEETING

- A. Contract Administrator will schedule and preside over meeting after notice of award.
- B. Attendance required by Architect-Engineer, Owner, and Contractor.
- C. Minimum agenda:
 - 1. Distribution of Contract Documents.
 - 2. Contractor submission of List of Subcontractors, List of Products, Preliminary List of Proposed Submittals, Schedule of Values, and Construction Progress Schedule.
 - 3. Designation of personnel representing parties in Contract and Architect-Engineer.
 - 4. Communication procedures.
 - 5. Procedures and processing of requests for interpretations, field decisions, field orders, Submittals, Substitutions, Applications for Payments, Proposed Change

Order Requests, Change Orders, Construction Change Directives and Contract Closeout procedures.

- 6. Construction Progress Scheduling.
- 7. Critical Work sequencing.
- D. Contract Administrator will record minutes and distribute copies to participants within five (5) weekdays after meeting.

1.5 SITE MOBILIZATION MEETING

- A. Contract Administrator will schedule and preside over the meeting at the Site prior to Contractor occupancy.
- B. Attendance required by Architect-Engineer, Owner, Contractor's Superintendent, and major Subcontractors.
- C. Minimum agenda:
 - 1. Use of premises by Owner and Contractor.
 - 2. Owner's requirements and partial occupancy, if required.
 - 3. Construction facilities and controls provided by Owner.
 - 4. Temporary utilities provided by Contractor.
 - 5. Survey layout.
 - 6. Construction certification requirements.
 - 7. Security and housekeeping procedures.
 - 8. Contractor submission of Final List of Submittals.
 - 9. Schedules.
 - 10. Procedures for Quality Assurance Testing, including both source and field quality control.
 - 11. Owner submission of a List of Tests and Inspections and subsequent Record Documents required by the Authorities Having Jurisdiction.
 - 12. Procedures for maintaining Record Documents.
 - 13. Requirements for startup of equipment.

- 14. Inspection and acceptance of equipment put into service during construction period.
- D. Contract Administrator will record minutes and distribute to participants within five (5) weekdays after meeting.

1.6 CONSTRUCTION PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum every other week intervals.
- B. Contract Administrator will make arrangements for meetings, prepare agenda with copies for participants, and preside over meetings.
- C. Attendance required by Contractor's Superintendent, major Subcontractors, Architect-Engineer, and Owner, as appropriate to agenda topics for each meeting.

D. Minimum agenda:

- 1. Review minutes of previous meetings.
- 2. Review of Work progress.
- 3. Maintenance of Record Documents
- 4. Field observations, problems, and decisions.
- 5. Identification of problems impeding planned progress.
- 6. Review of Submittal schedule and status of Submittals.
- 7. Review of off-site fabrication and delivery schedules.
- 8. Maintenance of Construction Progress Schedule.
- 9. Corrective measures, as necessary, to regain projected schedules.
- 10. Planned progress during succeeding Work period.
- 11. Coordination of projected progress.
- 12. Inspections by Authorities Having Jurisdiction.
- 13. Maintenance of quality and Work standards.
- 14. Effect of proposed changes on Construction Progress Schedule and coordination.
- 15. Other business relating to Work.

E. Contract Administrator will record minutes and distribute to participants within five (5) weekdays after meeting.

1.7 PRE-INSTALLATION MEETINGS

- A. When required in individual Technical Specifications Sections, Contractor to convene Pre-installation Meeting(s) at Site before starting Work of specific Section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific Section.
- C. Notify Owner and Architect-Engineer five (5) Working Days in advance of meeting date.
- D. Contractor to prepare agenda and preside over meeting:
 - 1. Review conditions of installation, preparation, and installation procedures.
 - 2. Review coordination with related Work.
- E. Contract Administrator will record minutes and distribute to participants within five (5) Working Days after meeting.

1.8 CLOSEOUT MEETING

- A. Contractor to schedule Project Closeout Meeting with sufficient time to prepare for requesting substantial completion.
- B. Attendance required by Contractor's Superintendent, major Subcontractors, Architect-Engineer, Owner, and others appropriate to agenda.
- C. Notify Contract Administrator five (5) Working Days in advance of meeting date.
- D. Minimum agenda:
 - 1. Start-up of facilities and systems.
 - 2. Operations and maintenance manuals.
 - 3. Testing, adjusting, and balancing.
 - 4. System demonstration and observation.
 - 5. Operation and maintenance instructions for Owner's personnel.
 - 6. Contractor's inspection of Work.
 - 7. Contractor's preparation of an Initial Punch List.

- 8. Procedure to request Architect-Engineer inspection to determine date of substantial completion.
- 9. Completion time for correcting deficiencies.
- 10. Inspections by Authorities Having Jurisdiction.
- 11. Certificate of Occupancy (*if needed*) and transfer of insurance responsibilities.
- 12. Final Cleaning.
- 13. Preparation for final inspection of construction.
- 14. Closeout Submittals:
 - a. Project Record Documents, including Record As-Built Drawings.
 - b. Operating and maintenance documents.
 - c. Operating and maintenance materials.
 - d. Affidavits.
- E. Contract Administrator will record minutes and distribute to participants within five (5) weekdays after meeting.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittals.
- B. Quality Assurance.
- C. Format for Construction Progress Schedule.
- D. Construction Progress Schedule.
- E. Review and Evaluation.
- F. Updating Schedules.
- G. Distribution.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 30 00 Administrative Requirements
- D. Section 01 33 00 Submittal Procedures

1.3 SUBMITTALS

- A. Within ten (10) Working Days of the Pre-construction Meeting and prior to the Site Mobilization Meeting, submit proposed preliminary network diagram defining planned operations for the completion of Work and date of substantial completion.
- B. Participate in review of preliminary and complete network diagrams jointly with Architect-Engineer.
- C. Within five (5) Working Days of joint review, submit written certification that major Subcontractors have reviewed and accepted proposed schedule along with a complete Construction Progress Schedule consisting of network diagrams and mathematical analyses (as required).
- D. Submit updated Construction Progress Schedules at each Construction Progress Meeting.

- E. Submit number of opaque reproductions Contractor requires, plus two (2) copies Architect-Engineer will retain.
- F. Submit Construction Progress Schedules under transmittal letter form specified in Section 01 33 00 Submittal Procedures.
- G. Construction Progress Schedule updates:
 - 1. Overall percent complete, projected and actual.
 - 2. Completion progress by listed activity and subactivity, to within five (5) Working Days prior to submittal.
 - 3. Changes in Work scope and activities modified since submittal.
 - 4. Delays in Submittals or Resubmittals, deliveries, or Work.
 - 5. Adjusted or modified sequences of Work.
 - 6. Other identifiable changes.
 - 7. Revised projections of progress and completion.
- H. Narrative Progress Report:
 - 1. Submit with each submission of Construction Progress Schedule.
 - 2. Summary of Work completed during the past period between Reports.
 - 3. Work planned during the next period.
 - 4. Explanation of differences between summary of Work completed and Work planned in previously submitted Narrative Progress Report.
 - 5. Current and anticipated delaying factors and estimated impact on other activities and completion milestones.
 - 6. Corrective action taken or proposed.

1.4 QUALITY ASSURANCE

A. <u>Scheduler:</u> Contractor's personnel specializing in critical path method (CPM) scheduling with three (3) years' minimum experience in scheduling construction work of complexity comparable to the Project and having use of computer facilities capable of delivering detailed graphic printout within forty-eight (48) hours of request.

B. <u>Contractor's Administrative Personnel:</u> three (3) years' minimum experience in using and monitoring CPM schedules on comparable Projects.

1.5 FORMAT FOR CONSTRUCTION PROGRESS SCHEDULE

- A. Listings: Reading from left to right, in ascending order for each activity. Identify each activity with applicable Technical Specification Section number.
- B. Diagram sheet size: 24 inches high x 36 inches wide (maximum or that required to render elements legible when printed).
- C. Scale and spacing: To allow for notations and revisions.

1.6 CONSTRUCTION PROGRESS SCHEDULE

- A. Prepare Construction Progress Schedule diagrams and supporting mathematical analyses (as required) using CPM.
- B. Illustrate order and interdependence of activities and sequence of Work; how start of given activity depends on completion of preceding activities, and how completion of activity may restrain start of subsequent activities.
- C. Illustrate complete sequence of construction by activity, identifying Work of separate stages. Indicate dates for submittals, including dates for Owner-furnished items, and return of Submittals; dates for procurement and delivery of critical products; and dates for installation and provision for testing. Include legend for symbols and abbreviations used.
- D. Mathematical analysis: Tabulate each activity of detailed network diagrams using calendar dates, and identify for each activity:
 - 1. Preceding and following event numbers.
 - 2. Activity description.
 - 3. Estimated duration of activity, in maximum fifteen (15) day intervals.
 - 4. Status of critical activities.
 - 5. Earliest start date.
 - 6. Earliest finish date.
 - 7. Actual start date.
 - 8. Actual finish date.

- 9. Latest start date.
- 10. Latest finish date.
- 11. Total and free float; accrue float time to Owner and to Owner's benefit.
- 12. Monetary value of activity, keyed to Schedule of Values.
- 13. Percentage of activity completed.
- 14. Responsibility.
- E. Analysis program: Capable of compiling monetary value of completed and partially completed activities, of accepting revised completion dates, and of recomputing of scheduled dates and float.
- F. Required sorts: List activities in sorts or groups:
 - 1. By preceding Work item or event number from lowest to highest.
 - 2. By longest float, then in order of early start.
 - 3. By responsibility in order of earliest possible start date.
 - 4. In order of latest allowable start dates.
 - 5. In order of latest allowable finish dates.
 - 6. Contractor's periodic payment request sorted by specification sections.
 - 7. List of basic input data-generating report.
 - 8. List of activities on critical path.
- G. Prepare subschedules for each stage of Work and sequencing of Construction Plan identified in Section 01 10 00 Summary of Work.
- H. Coordinate contents with Schedule of Values in Section 01 33 00 Submittal Procedures.

1.7 REVIEW AND EVALUATION

- A. Participate in joint review and evaluation of schedules with Architect-Engineer at each Submittal.
- B. Evaluate Project status to determine Work behind schedule and Work ahead of schedule.

C. After review, revise schedules incorporating results of review, and resubmit at the next Construction Progress Meeting.

1.8 UPDATING SCHEDULES

- A. Maintain Construction Progress Schedule to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update Construction Progress Schedule to depict current status of Work.
- C. Identify activities modified since previous Submittal, major changes in Work, and other identifiable changes.
- D. Upon approval of a Change Order, include the change in the next Construction Progress Schedule Submittal.
- E. Indicate changes required to maintain date of substantial completion.
- F. Submit sorts as required to support recommended changes.
- G. Prepare Narrative Report to define problem areas, anticipated delays, and impact on Construction Progress Schedule. Report corrective action taken or proposed and its effect including effects of changes on schedules of separate Subcontractors.

1.9 DISTRIBUTION

- A. Following joint review, distribute copies of updated Construction Progress Schedule to Contractor's Project Site file, to Subcontractors, suppliers, Architect-Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General Submittal Requirements.
- B. Product Data Submittals.
- C. Shop Drawing Submittals.
- D. Samples.
- E. Other Submittals.
- F. Certified Shop Test Reports.
- G. Test Reports.
- H. Certificates.
- I. Manufacturer's Instructions.
- J. Manufacturer's Field Reports.
- K. Erection Drawings.
- L. Construction Photographs.
- M. Contractor Review.
- N. Architect-Engineer Review.
- O. Reliance on Electronic CAD Files of Construction Plans.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 20 00 Price and Payment Procedures
- D. Section 01 25 00 Substitution Procedures
- E. Section 01 30 00 Administrative Requirements
- F. Section 01 32 16 Construction Progress Schedule
- G. Section 01 40 00 Quality Requirements
- H. Section 01 50 00 Temporary Facilities and Controls
- I. Section 01 70 00 Execution and Closeout Requirements
- J. Section 01 900 0 Reference Standards

1.3 GENERAL SUBMITTAL REQUIREMENTS

- A. The Contractor shall prepare a Preliminary List of Proposed Submittals which will be provided to the Architect-Engineer for review and approval at the Pre-construction Meeting, prior to the commencement of construction activities. Shop Drawings for all materials, products, and fabrications included on the approved, Final List of Submittals, provided to the Architect-Engineer at the Site Mobilization Meeting, shall be submitted to the Architect-Engineer for review and approval. The Final List of Submittals shall identify each Submittal with a unique identification code and the reference in the Technical Specifications which require the Submittal. The Final List of Submittals shall contain spaces to insert the following information:
 - 1. Anticipated and actual date when Submittals will be/were transmitted to Architect-Engineer for review.
 - 2. Date on which Submittals are returned by Architect-Engineer.
 - 3. Subsequent dates of transmittal and returns for Submittals requiring revision or resubmission, as appropriate.
 - 4. Status of Submittal (i.e., Accepted, Accepted as Noted, Revise and Resubmit, or Rejected) based on Architect-Engineer's latest review.
- B. The Contractor shall maintain an updated Final List of Submittals to identify the status of Submittals and shall bring the current list to Construction Progress Meetings and transmitted to the Architect-Engineer upon request. Receipt of the updated Final List of

- Submittals shall also be a prerequisite to any partial estimate made for items for which Submittals are required.
- C. Transmit each Submittal with AIA G810 Transmittal Letter.
- D. Each transmittal form shall indicate unique identification code from the Final List of Submittals. Mark revised Submittals with original number and sequential alphabetic suffix.
- E. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of the Work and Contract Documents.
- F. Submit number of copies Contractor requires, plus one (1) electronic copy to the Architect-Engineer and one (1) electronic copy to the Owner.
- G. Each Submittal shall have a space for the Architect-Engineer's stamp. The space shall be at least 3-1/2 inches wide by 5 inches high.
- H. Schedule Submittals to expedite project and email a PDF file to Architect-Engineer at email address and/or cloud-based file sharing platform (e.g. SharePoint, etc.) provided at the Pre-construction Meeting. Coordinate submission of related items.
- I. Identify variations in Contract Documents and product or system limitations that may be detrimental to successful performance of completed Work.
- J. Complete Submittals for each item are required. Delays resulting from incomplete Submittals are not the responsibility of Architect-Engineer.
- K. Allow ten (10) business days for Architect-Engineer's review of each Submittal, starting from the date the Submittal is received by Architect-Engineer.
- L. After review, produce copies and distribute according to "Submittal Procedures" Article and for Record Documents described in Section 01 70 00 Execution and Closeout Requirements.

1.4 PRODUCT DATA SUBMITTALS

- A. Submit to Architect-Engineer for review for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

C. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.5 SHOP DRAWINGS SUBMITTALS

- A. Submit to Architect-Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. The Contractor, on approval from the Architect-Engineer, may submit manufacturer's literature as a substitute for, or supplement to, the Shop Drawings. The minimum size for any submission shall be 8½ inches by 11 inches, and the maximum size shall not exceed 24 inches by 36 inches.
- C. Shop Drawings or printed matter shall give all dimensions and sizes to enable the Architect-Engineer to pass on the suitability of the material or layout for the purpose intended. The Shop Drawings shall, where needed for clarity, include outline and sectional views, and detailed working dimensions and designations of the kind of materials and kinds of machine work and finishes required. Shop Drawings for submission shall be coordinated by the Contractor with Shop Drawings previously submitted, with Shop Drawings being prepared, and with the design and function of any equipment or structure.
- D. If the Shop Drawings show variances from the requirements of the Contract Documents because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in the Transmittal Letter in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise the Contractor will not be relieved of the responsibility for executing the Work in accordance with the Contract Documents even though such Shop Drawings have been accepted by the Architect-Engineer.
- E. When required by individual Technical Specification Sections, provide Shop Drawings signed and sealed by a professional Architect-Engineer licensed in the State of New York responsible for designing components shown on Shop Drawings.
 - 1. Include signed and sealed calculations to support design.
 - 2. Submit Shop Drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
- F. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- G. Material shall not be purchased or fabricated for equipment or structures until the Architect-Engineer has reviewed the Shop Drawings, which shall represent all materials and Work involved in the construction. No materials or equipment for which a Submittal of a Shop Drawing is required shall be delivered to the Site unless they are in

- conformance with the Shop Drawings which have been "Accepted" or "Accepted as Noted."
- H. Work shall not be done upon any part of a structure, the design or construction of which is dependent upon the design of equipment or other features, for which approval is required, until such approval has been received from the Architect-Engineer.
- I. For all major construction items, essential for the operation of the facility, Shop Drawing, Samples and Other Submittals shall be submitted to the Architect-Engineer sufficiently in advance of construction of each item to afford adequate time for review and revisions if necessary.

1.6 SAMPLES

- A. Submit to Architect-Engineer for assessing conformance with information given and design concept expressed in Contract Documents.
- B. Samples for selection as specified in Product Sections:
 - 1. Submit to Architect-Engineer for aesthetic, color, and finish selection.
 - 2. Submit Samples of finishes, textures, and patterns for Architect-Engineer selection.
- C. Submit Samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate Sample Submittals for interfacing Work.
- D. Include identification on each Sample, with full Project information.
- E. Submit number of Samples specified in individual Technical Specification Sections; Architect-Engineer will retain one (1) Sample.
- F. Reviewed Samples that may be used in the Work are indicated in individual Technical Specification Sections.
- G. Samples will not be used for testing purposes unless specifically stated in Technical Specification Section.
- H. After review, produce copies and distribute according to "Submittal Procedures" Article and for Record Documents described in Section 01 70 00 Execution and Closeout Requirements.

1.7 OTHER SUBMITTALS

A. Closeout Submittals: Comply with Section 01 70 00 - Execution and Closeout Requirements.

B. Submit information for assessing conformance with information given and design concept expressed in Contract Documents.

1.8 CERTIFIED SHOP TEST REPORTS

- A. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function or special requirements are specified shall be tested in the shop of the manufacturer in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents. Tests shall be conducted in accordance with the test codes of the ASME, NEMA, ASTM, and other applicable standards.
- B. Equipment shall not be shipped to the Work until the Architect-Engineer notified the Contractor in writing that the results of the shop tests are acceptable.
- C. When the Technical Specifications require witness shop tests at the point of manufacture, the only tests which will be accepted are those made in the presence of the Architect-Engineer or their representative. The Contractor shall give the Architect-Engineer written notice ten (10) business days in advance of the time when the equipment will be ready for the witness shop tests, or as required by the Technical Specifications. This notification shall include a diagram of the testing setup and a list of the instruments the manufacturer proposes to use for the tests. All instruments shall be ranges suitable for the quantities to be measured, with approved laboratory calibration. Five (5) copies of the witness shop test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company, shall be forwarded to the Architect-Engineer.

1.9 TEST REPORTS

A. Submit test reports for assessing conformance with performance requirements contained in the Contract Documents.

1.10 CERTIFICATES

- A. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- B. Certificates may be recent or previous test results on material or product but must be acceptable to Architect-Engineer.

1.11 MANUFACTURER'S INSTRUCTIONS

A. Submit printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, to Architect-Engineer in quantities specified for product data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.12 MANUFACTURER'S FIELD REPORTS

A. Submit reports within five (5) business days of observation for assessing conformance with information given and design concept expressed in Contract Documents.

1.13 ERECTION DRAWINGS

- A. Submit drawings for information assessing conformance with information given and design concept expressed in Contract Documents.
- B. Data indicating inappropriate or unacceptable Work may be subject to action by Architect-Engineer or Owner.

1.14 CONSTRUCTION PHOTOGRAPHS

- A. Provide photographs of Site and for each construction element throughout progress of Work produced by an experienced photographer acceptable to Architect-Engineer.
- B. Submit photographs during Construction Progress Meetings.
- C. Take five (5) time stamped Site photographs from different locations indicating relative progress of the Work, two (2) days maximum before submitting.
- D. Take photographs as evidence of Work performed since prior Construction Progress Meeting to depict existing project conditions as follows:
 - 1. Interior views: minimum ten (10) photos.
- E. Identify each print on front. Identify name of Project, Contract number orientation of view, subject of photo, date and time of view, name and address of photographer, and photographer's numbered identification of exposure.
- F. Digital Images: Deliver complete set of digital image electronic files on CD-ROM, USB Drive, or similar external storage device to Owner with Project Record Documents. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as sensor, uncropped.
 - 1. Digital Images: Uncompressed TIFF or JPEG format, produced by digital camera with minimum sensor size of 4.0 megapixels, and image resolution of not less than 1600 by 1200 pixels.
 - 2. Date and Time: Include date and time in filename for each image.

1.15 CONTRACTOR REVIEW

- A. Review for compliance with Contract Documents and approve Submittals before transmitting to Architect-Engineer.
- B. Contractor shall be responsible for:
 - 1. Determination and verification of materials including manufacturer's catalog numbers.
 - 2. Determination and verification of field measurements and field construction criteria.
 - 3. Checking and coordinating information in Submittal with requirements of Work and of Contract Documents.
 - 4. Determination of accuracy and completeness of dimensions and quantities.
 - 5. Confirmation and coordination of dimensions and field conditions at Site.
 - 6. Construction means, techniques, sequences, and procedures.
 - 7. Safety precautions.
 - 8. Coordination and performance of Work of all trades.
- C. Stamp, sign or initial, and date each Submittal to certify compliance with requirements of Contract Documents.
- D. Do not fabricate products or begin Work for which Submittals are required until approved Submittals have been received from Architect-Engineer.

1.16 ARCHITECT-ENGINEER REVIEW

- A. To reduce delays and costs, Submittals shall be made electronically (*via .PDF file format*) whenever possible to the Architect-Engineer and Owner.
- B. The Contractor shall review all Shop Drawings or literature submitted, and those submitted on behalf of Subcontractors and manufacturers, for correctness and adequacy of data prior to submitting such Shop Drawings and literature to the Architect-Engineer for approval. The Contractor shall be responsible for the prompt transmission of Submittals to the Architect-Engineer, so that there shall be no delay to the Work due to the absence of such drawings.
- C. The Architect-Engineer's review will be performed to assess conformance with the design concept of the Project and with the information given in the Contract Documents.

- D. Marked Submittals will be retained by the Architect-Engineer and the Owner and will be emailed back to, or placed on a cloud-based file sharing platform accessible by, the Contractor. Following review by the Architect-Engineer, all Submittals will be marked by the Architect-Engineer in one (1) of the following ways, all subject to Contract requirements:
 - 1. "Accepted," which means that no exceptions are taken. Any approval by the Architect-Engineer of such, or part of such, Shop Drawings, manufacturer's literature, or other data relative to the Work or material to be furnished for the Contract shall not be construed in any way as relieving the Contractor from its responsibility for errors or omissions in the Shop Drawings or from any of its other responsibilities under the terms of the Contract, but shall be interpreted only to mean that an examination of the exhibits has been made, that no variation from the Contract requirements has been discovered, and that no criticism is offered. The Architect-Engineer's approval of a separate item shall not indicate approval of an assembly in which the item functions.
 - 2. "Accepted as Noted," which means that minor corrections as noted and/or indicated on the Submittal shall be made. Resubmittal is not required as long as the material for which the Submittal was made is produced, delivered, and installed as notated by the Architect-Engineer.
 - 3. "Revise and Resubmit," which means that major corrections are noted and/or indicated on the Submittal and resubmittal is required.
 - 4. "Rejected," which means that the Submittal is completely rejected and a resubmittal is required. The Contractor shall direct specific attention, in writing or on resubmittals, to revisions other than the corrections noted and/or indicated by the Architect-Engineer on previous submission.
- E. When revised for resubmission, identify changes made since previous submission.
- F. Distribute copies of reviewed Submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.
- G. The Contractor shall be responsible for the prompt submission of all Shop Drawings, so that there shall be no delay to the Work due to the absence of Shop Drawings.
- H. Any approval by the Architect-Engineer of a Submittal shall not be construed in any way as relieving the Contractor from its full responsibilities under the terms of the Contract, but shall be interpreted only to mean that an examination of the exhibits has been made, that no variation from the Contract requirements has been discovered, and that no criticism is offered. Approval of a separate item shall not indicate approval of an assembly in which the item functions.

- I. Do not make "Mass Submittals" to Architect-Engineer. "Mass Submittals" are defined as six (6) or more Submittals or items in one (1) day or twenty (20) or more Submittals or items in one (1) week. If "Mass Submittals" are received, Architect-Engineer's review time stated above will be extended as necessary to perform proper review. Architect-Engineer will review "Mass Submittals" based on priority determined by Architect-Engineer after consultation with Owner and Contractor.
- J. Submittals made by Contractor that are not required by Contract Documents may be returned without action. Submittal and/or return of such non-required Submittals shall not be construed by the Contractor as an approval, unless specifically marked by the Architect-Engineer with a review stamp and disposition.
- K. Submittal approval does not authorize changes to Contract requirements unless accompanied by Change Order.
- L. Owner may withhold monies due to Contractor to cover additional costs beyond the second Submittal review.

1.17 RELIANCE ON ELECTRONIC CAD FILES OF CONSTRUCTION PLANS

- A. Electronic CAD Files of Construction Plans: May only be used to expedite production of Shop Drawings for the Project. Use for other projects or purposes is not allowed.
- B. Electronic CAD Files of Construction Plans: Distributed only under the following conditions:
 - 1. Use of CAD files is solely at receiver's risk. Architect-Engineer and Owner do not warrant accuracy of CAD files. Receiving CAD files in electronic form does not relieve receiver of responsibilities for measurements, dimensions, and quantities set forth in Contract Documents. In the event of ambiguity, discrepancy, or conflict between information in CAD files and that in Contract Documents, notify Architect-Engineer and Owner of discrepancy and use information in PDF or hard-copy Construction Plans and Technical Specifications.
 - 2. CAD files may not necessarily represent the latest Contract Documents, existing conditions, and as-built conditions. Receiver is responsible for determining and complying with these conditions and for incorporating addenda and modifications.
 - 3. User is responsible for removing information not normally provided on Shop Drawings and removing references to Contract Documents. Shop Drawings submitted with information associated with other trades or with references to Contract Documents will not be reviewed and will be immediately returned.
 - 4. Receiver shall not hold Architect-Engineer or Owner responsible for data or file clean-up required to make CAD files usable, nor for error or malfunction in translation, interpretation, or use of this electronic information.

- 5. Receiver shall understand that, even though Architect-Engineer and Owner have computer scanning software to detect presence of computer viruses and other malware, there is no guarantee that computer viruses or other malware are not present in files or in electronic media used to transmit CAD or PDF files.
- 6. Receiver shall not hold Architect-Engineer or Owner responsible for viruses or other malware or their consequences and shall hold Architect-Engineer and Owner harmless against costs, losses, or damage caused by presence of computer virus or other malware in files or media.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality Control.
- B. Tolerances.
- C. References.
- D. Labeling.
- E. Mock-up Requirements.
- F. Testing and Inspection Services Requirements.
- G. Testing and Inspection Services.
- H. Manufacturers' Field Services.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 33 00 Submittal Procedures
- D. Section 01 90 00 Reference Standards

1.3 QUALITY CONTROL

- A. For Contracts No. 1 and 2 (General and Plumbing & Fire Inspection), Owner shall secure and pay for permits, inspections, and testing required for the construction elements included within the Contract as described within the Contract Documents. Contractor shall plan and coordinate all inspections required by State or local Authorities Having Jurisdiction, the Owner, or the Architect-Engineer and submit copies of the acceptance certificates to Owner prior to completion of the Project. A minimum forty-eight (48) hour notice shall be provided to the inspector, Owner, and/or Architect-Engineer unless otherwise required by the inspector.
- B. For Contract No. 3 (*Electrical*), Owner shall secure and pay for permits required for the construction elements included within the Contract as described within the Contract

Documents. Contractor shall secure and pay for inspections and testing required for the construction elements included within the Contract as described within the Contract Documents. Contractor shall plan and coordinate all inspections required by State or local Authorities Having Jurisdiction, the Owner, or the Architect-Engineer and submit copies of the acceptance certificates to Owner prior to completion of the Project. A minimum forty-eight (48) hour notice shall be provided to the inspector, Owner, and/or Architect-Engineer unless otherwise required by the inspector.

- C. Monitor quality control over suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.
- D. Comply with specified standards as the minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work using persons qualified and equipment designed and maintained to produce required and specified quality.
- F. Products, materials, and equipment may be subject to inspection by Architect-Engineer and Owner at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.
- G. Supervise performance of Work in such manner and by such means to ensure that Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.

1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate or "stack".
- B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When such tolerances conflict with Contract Documents, request clarification from Architect-Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.5 REFERENCES

- A. ANSI/ASTM D3740 Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- B. ANSI/ASTM E329 Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.
- C. 2020 Building Code of New York State, Chapter 17 Special Inspections and Tests.

- D. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or are required by applicable codes.
- E. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.
- F. Obtain copies of standards and maintain on Site when required by product Technical Specifications Sections.
- G. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Architect-Engineer before proceeding.
- H. Neither contractual relationships, duties, or responsibilities of parties in Contract nor those of Architect-Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.6 LABELING

- A. Attach label from agency approved by Authorities Having Jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
- B. Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label:
 - 1. Model number.
 - 2. Serial number.
 - 3. Performance characteristics.
- C. Manufacturer's Nameplates, Trademarks, Logos, and Other Identifying Marks on Products: Not allowed on surfaces exposed to view in public areas, interior or exterior.

1.7 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this Section and identified in individual product Technical Specifications Sections.
- B. Assemble and erect specified or indicated items with specified or indicated attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mockups shall be comparison standard for remaining Work.
- D. Where mockup has been accepted by Architect-Engineer and is specified in product Technical Specifications Sections to be removed, remove mockup and clear area when directed to do so by Architect-Engineer.

1.8 TESTING AND INSPECTION SERVICES REQUIREMENTS

- A. Inspection The Contractor agrees to a thorough inspection of the Work, including all labor performed and materials furnished, delivered, or intended to be used in the Work, and including manufacture, preparations and testing at such times as the Owner, Architect-Engineer, or the Authorities Having Jurisdiction desire. The Contractor shall not use any material which has not been inspected or tested and accepted. The Contractor shall keep the Architect-Engineer advised of the progress of the Work away from the Site requiring inspection or witnessing of tests, so that arrangements may be made for inspection at the proper time.
- B. Inspection, tests, or acceptance of any material prior to shipment shall not be deemed as a final acceptance of the materials. The Architect-Engineer may inspect or require tests or analyses of any portion of the materials at any time after delivery to the Site either before or after installation, and any material which is found to be defective or which does not otherwise conform to the requirements of the Contract Documents will be rejected and shall be removed forthwith from the Site, as provided in the Contract.
- C. The performance of such inspections and acceptance of the Work by the Owner or the Architect-Engineer will in no way release the Contractor of its complete responsibility for construction means, methods and techniques, and for performing the Work in accordance with the Contract Documents.
- D. No Work shall be closed or covered up until it has been duly inspected and approved by the Architect-Engineer and/or the Authorities Having Jurisdiction. Should unapproved Work be covered, the Contractor shall, at its own expense, uncover all Work so that it can be properly inspected, properly repair and replace all such Work if found defective, and shall close or cover the approved Work according to Project requirements.
- E. Significance of Tests Test results shall be binding on both the Contractor and the Owner, and shall be considered irrefutable evidence of compliance or non-compliance with the Technical Specification requirements, unless supplementary testing shall prove, to the satisfaction of the Architect-Engineer and the Authorities Having Jurisdiction, that the initial samples were not representative of actual conditions.
- F. Supplementary and Other Testing Nothing shall restrict the Contractor from conducting tests they may require. If the Contractor at any time requests that the Owner consider such test results, the test reports shall be certified by an independent testing laboratory acceptable to the Owner. Testing of this nature shall be conducted at the Contractor's expense.
- G. In the event of a conflict between initial and supplementary testing to determine the acceptability of the Work with respect to Project requirements, a third set of testing shall be performed to determine the acceptability of the Work. Absent this third set of testing, the Work represented by such testing shall be considered to be nonconforming and shall

be remedied to the satisfaction of the Architect-Engineer and the Authorities Having Jurisdiction and subsequently retested.

1.9 TESTING AND INSPECTION SERVICES

- A. Testing agency or laboratory will perform tests, inspections, Special Inspections required by code, and other services specified in individual Technical Specifications Sections and as required by Architect-Engineer, Owner, and Authorities Having Jurisdiction.
 - 1. A list of the tests, inspections, and subsequent Record Documents required by the Authority Having Jurisdiction will be provided to the Contractor by the Owner during the Site Mobilization Meeting.
 - 2. Before starting Work, coordinate and document all testing agency and laboratory names, addresses, and telephone numbers, with the Owner prior to commencement of Work.
 - 3. Submit copy of report of testing laboratory facilities' inspection made by Material Measurement Laboratory of National Institute of Standards and Technology (NIST) during most recent inspection, with memorandum of remedies of deficiencies reported by inspection (*if applicable*).
 - 4. Employment of testing agency or laboratory shall in no way relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- B. Inspection or testing performed exclusively for the Contractor's convenience and its own quality assurance shall be the sole responsibility of the Contractor.
- C. Independent firm will perform tests, inspections, Special Inspections required by code, and other services specified in individual Technical Specifications Sections and as required by Architect-Engineer, Owner, and Authorities Having Jurisdiction.
 - 1. Comply with requirements of GAI-LAP, ANSI/ASTM E329, and ANSI/ASTM D3740.
 - 2. Laboratory: Authorized to operate in State of New York.
 - 3. Laboratory Staff: Maintain full-time Professional Engineer or specialist on staff to review services, as required by the Contract Documents.
 - 4. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards (NBS) or accepted values of natural physical constants.
 - 5. Laboratory Responsibilities:

- a. Test samples of materials submitted by Contractor and/or Owner.
- b. Provide qualified personnel. Cooperate with Architect-Engineer and Contractor in performance of services.
- c. Perform specified inspection, sampling, and testing of products in accordance with specified standards.
- d. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- e. Promptly notify Architect-Engineer and Contractor of observed irregularities or non-conformance of Work or Products.
- f. Perform additional inspections and tests required by Architect-Engineer.
- D. Testing, inspections, and source quality control may occur on or off Site. Perform off-site testing as required by Architect-Engineer or Owner.

E. Laboratory Reports:

1. Reports shall be submitted by independent firm to Architect-Engineer, Contractor, and Authorities Having Jurisdiction, in duplicate, indicating observations and results of tests and compliance or noncompliance with Contract Documents.

2. Include:

- a. Date issued.
- b. Project title and number.
- c. Name of inspector.
- d. Date and time of sampling or inspection.
- e. Identification of product and Technical Specifications Section.
- f. Location in the Project.
- g. Type of inspection or test.
- h. Date of test.
- i. Results of tests.
- i. Conformance with Contract Documents.

- 3. When requested by Architect-Engineer, provide interpretation of test results.
- 4. Submit final report indicating correction of Work previously reported as noncompliant.
- F. Cooperate with independent firm; provide access to the Work, furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Architect-Engineer and independent firm minimum of forty-eight (48) hours (not including Saturday, Sunday, or Holidays), prior to expected time for operations requiring inspection and testing services.
 - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
 - 3. Provide incidental labor and facilities to provide access to Work to be tested, to obtain and handle samples at the Site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.
 - 4. Notify Architect-Engineer and laboratory a minimum of forty-eight (48) hours (not including Saturday, Sunday, or Holidays), prior to expected time for operations requiring inspection and testing services.
- G. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work according to requirements of Contract Documents.
- H. Retesting or re-inspection required because of nonconformance with specified or indicated requirements shall be performed by same independent firm on instructions from Architect-Engineer. Payment for retesting or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
- I. Testing Agency responsibilities:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at Site. Cooperate with Architect-Engineer, the Authorities Having Jurisdiction, and Contractor in performance of services.
 - 3. Perform indicated sampling and testing of products according to specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Architect-Engineer and Contractor of observed irregularities or nonconformance of Work or products.

- 6. Perform additional tests required by Architect-Engineer and/or the Authorities Having Jurisdiction.
- 7. Attend Preconstruction Meeting, Site Mobilization Meeting and Construction Progress Meetings.
- J. Agency reports: After each test, promptly submit two (2) copies of report to Architect-Engineer, Contractor, and Owner. When requested by Architect-Engineer, provide interpretation of test results. Include the following:
 - 1. Date issued.
 - 2. Project title and number.
 - 3. Name of inspector.
 - 4. Date and time of sampling or inspection.
 - 5. Identification of product and Technical Specifications Section.
 - 6. Location in Project.
 - 7. Type of inspection or test.
 - 8. Date of test.
 - 9. Results of tests.
 - 10. Conformance with Contract Documents.
- K. Limits on Testing Authority:
 - 1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency or laboratory may not approve or accept any portion of the Work.
 - 3. Agency or laboratory may not assume duties of Contractor nor the Architect-Engineer.
 - 4. Agency or laboratory has no authority to stop the Work.

1.10 MANUFACTURER'S FIELD SERVICES

A. When specified in individual Technical Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, startup of

- equipment, testing, adjusting, and balancing of equipment commissioning, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect-Engineer thirty (30) days in advance of required observations. Observer is subject to approval of Architect-Engineer.
- C. Report observations and Site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Refer to Section 01 3300 Submittal Procedures, "Manufacturer's Field Reports" Article.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION – Not Used

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. References.
- B. Applicable Regulations.
- C. Temporary Electricity.
- D. Temporary Heating.
- E. Temporary Cooling.
- F. Temporary Ventilation.
- G. Temporary Communication Services.
- H. Temporary Water Service.
- I. Temporary Sanitary Facilities.
- J. First Aid Facilities and Accidents
- K. Field Offices.
- L. Vehicular Access.
- M. Parking.
- N. Progress Cleaning and Waste Removal.
- O. Traffic Regulation.
- P. Security.
- Q. Protection of Existing Facility
- R. Maintenance.
- S. Dust Control.
- T. Noise Control.

- U. Water Control.
- V. Pest and Rodent Control.
- W. Pollution Control.
- X. Removal of Utilities, Facilities, and Controls.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Section 01 70 00 General Conditions
- C. Section 01 50 01 Health and Safety Provisions

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM E 119 Standard Test Methods for Fire Tests of Building Construction and Materials.

1.4 APPLICABLE REGULATIONS

A. In order to prevent environmental pollution and to provide for environmental protection arising from construction activities related to the performance of this Contract, the Contractor and Subcontractors shall comply with all applicable Federal, State, and local laws and regulations concerning environmental protection, as well as the specific requirements in this Section and elsewhere in the Technical Specifications.

1.5 TEMPORARY ELECTRICITY

- A. The Contractor shall be responsible for providing temporary portable electric power or electric utility service for construction (*as necessary*) and to provide uninterrupted power to the existing Facility as detailed within the Contract Documents. Contractor shall coordinate requirements of other Subcontractors, arrange for payments, and contact the electric utility (*as necessary*) to provide the service for the temporary power.
- B. If required by the Owner, the Contractor shall install a meter and pay for all expenses for electrical service used during the course of the Work.

1.6 TEMPORARY HEATING

A. It is the responsibility of the Contractor to provide any temporary heat services required during the course of construction including fuel and electric to protect installed materials, equipment, and facilities to meet the requirements of the Contract Documents.

1.7 TEMPORARY COOLING

A. It is the responsibility of the Contractor to provide any temporary cooling services required during the course of construction including fuel and electric to protect installed materials, equipment, and facilities to meet the requirements of the Contract Documents.

1.8 TEMPORARY VENTILATION

A. Ventilate enclosed areas to achieve curing of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.9 TEMPORARY COMMUNICATION SERVICES

A. Internet Service: The Contractor shall arrange with appropriate communications provider to provide internet service to the Site for construction needs at field offices and other locations as required to provide services for Owner, Architect-Engineer, and Contract Administrator.

1.10 TEMPORARY WATER SERVICE

- A. It is the responsibility of the Contractor to provide the temporary water service for construction, sanitary facilities, fire protection, and for required cleaning. Potable water shall be furnished for construction personnel by portable containers provided by the Contractor.
- B. The Contractor shall pay for all expenses associated with temporary water service during the course of the Work.
- C. Comply with all applicable codes and arrange for all necessary inspections and approvals.
- D. Upon completion of the Work, the Contractor shall remove all temporary water service appurtenances.

1.11 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide at the Site, suitable enclosed toilet facilities for the use of construction personnel. The Contractor shall observe and enforce all sanitary regulations and maintain satisfactory sanitary conditions around and on all parts of the Work.
- B. Adequate washing facilities shall be provided for the construction personnel.

C. Installation:

1. Install temporary sanitary facilities required for Contractor's use, ready for occupancy, five (5) Working Days after date of Notice to Proceed.

- D. Contractor shall maintain service and clean and disinfect facilities in a satisfactory manner and enforce proper use of the sanitary facilities.
- E. Contractor shall pay for all expenses associated with temporary sanitary facilities during the course of the Work, including furnishing all necessary permits and fees required for temporary sanitary facilities.
- F. Comply with all applicable codes and arrange for all necessary inspections and approvals.

1.12 FIRST AID FACILITIES AND ACCIDENTS

A. First aid facilities.

1. The Contractor shall provide, at the Site, such equipment and facilities as are necessary to supply first aid to Contractor's personnel who may be injured in connection with the Work.

B. Accidents.

- 1. Contractor shall comply with all requirements of the Site-Specific Health and Safety Plan (HASP) developed in conformance with the requirements of Section 01 50 01 Health and Safety Provisions.
- 2. The Contractor shall within twenty-four (24) hours report in writing to the Owner all accidents and incidents arising out of, or in connection with, the performance of the Work, whether on or adjacent to the Site, which cause death, personal injury or property damage, giving full details and statements of witnesses.
- 3. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Owner, the Architect-Engineer, and all appropriate regulatory agencies.
- 4. If any claim is made by anyone against the Contractor or a Subcontractor on account of any accidents, the Contractor shall promptly report the facts in writing to the Owner, giving full details of the claim.

1.13 FIELD OFFICES

- A. Owner will provide a portion of the third floor of Building 1 for use by the Contractor as field offices. A separate portion of this location will also be utilized by the Contract Administrator/Architect-Engineer/Owner.
 - 1. Due to the requirement that the existing Rock Cut Road Transfer Station Facility remain operational during the Work, combined with limited Site space, Contractor

- temporary installation and use of separate field office(s) will remain at the discretion of the Owner.
- B. Contractor shall have their identified Superintendent on-site at all times when their forces or Subcontractor(s) are performing Work.
- C. Construction meetings will be conducted either virtual and/or in the portion of the third floor of Building 1 reserved for the Contract Administrator/Architect-Engineer/Owner.
- D. Contractor material storage and staging area will be provided within the Building 2 Tipping Floor, Building 2 Basement, unencumbered area of the Building 2 Conveyor/Compactor Area, and outdoor storage limited to the areas depicted within the Construction Plans.
 - 1. Due to the requirement that the existing Rock Cut Road Transfer Station Facility remain operational during the Work, combined with limited Site space, Contractor material storage and staging areas are expected to consist only of that listed above. Any additional storage and staging locations will remain at the discretion of the Owner. The Owner may require intermittent or short-term use of any of the designated Contractor material storage and staging areas when not actively in use for this purpose by the Contractor.
- E. Contractor facilities and parking location shall be coordinated with the Owner.
 - 1. Due to the requirement that the existing Rock Cut Road Transfer Station Facility remain operational during the Work, combined with limited Site space, Contractor parking is expected to consist of that provided on-street. Any additional on-site parking locations will remain at the discretion of the Owner.
- F. Contractor field office and facilities:
 - 1. Telephone/Equipment Contractor's option.
 - 2. Other Furnishings Contractor's option but appropriate to accommodate expected use.
- G. Maintenance and cleaning:
 - 1. Daily janitorial services for field offices; periodic cleaning and maintenance for storage and staging areas.
 - 2. Maintain walks free of mud, water, snow, and the like.
- H. At completion of Work remove utility services and debris. Restore areas to same or better condition as original condition.

- 1. Remove temporary utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.
- 2. Clean and repair damage caused by installation or use of temporary Work.

1.14 VEHICULAR ACCESS

- A. Only use existing on-site areas outside of the active operational traffic paths for construction traffic.
- B. The existing Rock Cut Road Transfer Station Facility will remain in operation as depicted on Construction Plan Sheet No. C2 "Existing Site Conditions & Operations Plan" and detailed further within the Contract Documents during the duration of construction.

1.15 PARKING

- A. Locate on-street or on-site only as approved by the Owner.
- B. If on-street or Owner approved on-site space is not adequate, provide additional off-site parking.
- C. Do not allow heavy vehicles or construction equipment in parking areas.

1.16 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain Site in clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, before enclosing spaces.
- C. Broom and vacuum clean interior areas before starting surface finishing and continue cleaning to eliminate dust.
- D. Contractor shall provide roll-off containers for material disposal.
- E. Burning of rubbish or unused materials will not be permitted.

1.17 TRAFFIC REGULATION

- A. Traffic cones, drums, flares, and lights shall be as required by the Owner, Authorities Having Jurisdiction, and to protect existing Site operations.
- B. Flag person equipment shall be as required by Owner and Authorities Having Jurisdiction.

- C. Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes or on the Site's operational traffic.
- D. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

1.18 SECURITY

A. Security Program:

- 1. Protect Work on existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
- 2. Initiate program in coordination with Owner's existing security system at Project mobilization.
- 3. Maintain program throughout construction period until Owner occupancy.

B. Entry Control:

- 1. Restrict entrance of persons and vehicles to Project Site but allow unrestricted access by public to the existing Rock Cut Road Transfer Station Facility during normal operating hours.
- 2. Maintain log of workers and visitors and make available to Owner on request.

C. Restrictions:

- 1. Do not allow cameras on Site or photographs to be taken (*other than as required by these Technical Specifications*) except by written approval of Owner.
- 2. Do no Work on days or Holidays indicated in the Contract.

PART 2 PRODUCTS

2.1 GENERAL

A. All materials shall be in accordance with the Construction Plans and the Contractor's plan for environmental protection.

PART 3 EXECUTION

3.1 PROTECTION OF EXISTING FACILITY

A. General – It is intended that the existing assets and resources within the Project boundaries and outside the Limits of Work performed under this Contract be preserved in their present condition, or be restored to a condition after completion of construction

that matches that prior to the commencement of the Work, and will not detract from the appearance of the Project. The Contractor shall confine its construction activities to areas defined on the Construction Plans or in the Technical Specifications except with written approval of the Owner and the Architect-Engineer.

B. Post-Construction Cleanup or Obliteration – The Contractor shall obliterate all signs of temporary construction facilities such as work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction.

3.2 MAINTENANCE

- A. The Contractor shall dispose of all discarded debris, aggregate samples and concrete test samples from any source whatsoever, in a manner approved by the Owner as discussed during Pre-construction Meeting. Toilet facilities shall be kept clean and sanitary at all times. Services shall be performed at such a time and in such a manner to least interfere with the operations. Services shall be accomplished to the satisfaction of the Owner.
- B. The Contractor shall frequently remove materials no longer required on the Site, such as forms, temporary structures and similar materials and equipment so that, at all times, the Site, access routes to the Site and any other areas disturbed by Contractor operations shall present a neat, orderly, workmanlike appearance.
- C. Before substantial completion inspection, the Contractor shall remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description, and put the Site in a neat, orderly condition; and restore all areas which have been used for storage of materials and equipment, and all areas which have been disturbed by its operations, to their original condition or to a condition satisfactory to and approved by the Owner

3.3 DUST CONTROL

- A. The Contractor shall maintain all Work areas within or without the Project boundaries free from dust which would cause a hazard or nuisance to others.
- B. The Contractor shall, at its own expense, keep dust under control at all times on all areas adjacent to the Work by the use of motor sweepers, vacuums, spraying water, dust suppressants, or a combination of these methods.
- C. Dust control shall be performed daily as the Work proceeds and whenever a dust nuisance or hazard occurs.
- D. All areas undergoing filling, cutting, or subject to other dust-producing activities by vehicles should be subjected to dust inhibiting practices.

3.4 NOISE CONTROL

A. The Contractor shall use every effort and means possible to minimize or eliminate noise caused by its operation which the Owner and/or Architect-Engineer may consider objectionable. The Contractor shall provide working machinery, designed to operate with the least possible noise. The Contractor is responsible for maintaining compliance with all applicable noise regulations and all County and local noise ordinances.

3.5 WATER CONTROL

A. Maintain excavations free of water. Provide, operate, and maintain necessary pumping equipment.

3.6 PEST AND RODENT CONTROL

- A. Provide methods, means, and facilities to prevent pests and insects from damaging the Work or infesting the Site.
- B. Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
 - 1. Where infestation of any kind is discovered, immediately notify Owner and advise as to what steps will be immediately taken to eliminate the infestation and what periodic preventative means will be employed to prevent future infestations.
 - 2. Submit a detailed plan for eliminating the infestation for review by the Owner. Follow procedures for submittals as described in Section 01 3300 Submittal Procedures.
 - 3. Do not use any chemicals to treat any infestation without obtaining the Owner's written approval.
 - 4. Use only methods and materials, which have been submitted and accepted by the Owner.

3.7 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- B. Comply with pollution and environmental control requirements of Federal, State, County, and Municipal laws.

3.8 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials before Final Application for Payment inspection.
- B. Clean and repair damage caused by installation or use of temporary Work.

END OF SECTION

SECTION 01 50 01

HEALTH AND SAFETY PROVISIONS

PART 1 GENERAL

1.1 This Section requires compliance with applicable safety codes, standards and regulations, including but not limited to OSHA, PESH, Building Code of New York State, Fire Code of New York State, and Facility Regulations.

1.2 SECTION INCLUDES

- A. General Requirements.
- B. Use of Hazardous Materials.

1.3 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 50 00 Temporary Facilities and Controls
- D. Section 01 90 00 Reference Standards

1.4 GENERAL REQUIREMENTS

- A. Contractor shall prepare a Site-Specific Health and Safety Plan (HASP) to provide specific guidelines and establish procedures for the protection of personnel performing the scope of activities, as described in the Contract Documents. The information in the HASP shall be developed in accordance with applicable standards, including but not limited to Section 01 90 00 Reference Standards, Title 29, Code of Federal Regulations, Parts 1910 and 1926, and to the extent possible, on previous studies and information available to date. The HASP is intended to be a working document in that it shall continually evolve as site conditions and knowledge of the Site and Work activities develop further. Adherence to the HASP as drafted alone shall provide the guidance necessary to initiate the Work and allow monitoring of Site conditions to determine the required protection. The Contractor shall update the HASP based upon consistent monitoring and implementation of the document to reflect lessons learned and to mitigate risks as they are identified during the course of the Work.
- B. The Contractor shall be solely responsible for the content and implementation of the HASP as far as its personnel and any Subcontractors are concerned. All of the Contractor's personnel and Subcontractors working on-Site shall be required to read and sign a statement attesting that they have read and agree to abide by the requirements of the Contractor's HASP.

- C. The Contractor agrees to comply with all the requirements and procedures contained in the HASP document. The requirements and procedures are as follows:
 - 1. The Contractor shall be responsible for maintaining a safe workplace and taking all prudent environmental, health and safety precautions to protect its employees, all other workers, and the public.
 - 2. Comply with all applicable Federal, State, municipal, local, and any other applicable occupational safety and health regulations and requirements issued imposed by any governmental authority (*including, but not limited to, Section 01 90 00 Reference Standards, Title 29, Code of Federal Regulations Parts 1910 and 1926*).
 - 3. The Contractor agrees to monitor working conditions at all times during construction and, as necessary, to provide appropriate protective clothing, equipment and facilities for its personnel, and/or to establish workplace procedures to ensure their safety. Any personnel on Site shall comply with the PPE requirements listed within the Contractor supplied HASP.
 - 4. If, at any time, the Owner or the Architect-Engineer is apprised of a safety hazard which demands immediate attention due to potential for harm to the public, persons on or about the Work, or public or private property, the Owner or the Architect-Engineer shall have the right to order such safeguards to be erected and such precautions to be taken as necessary, and the Contractor shall comply with such orders. If, under such circumstances the Contractor does not or cannot immediately put the Work into proper and approved condition, or if the Contractor or its representative is not upon the Site so that it can be notified immediately of the insufficiency of safety precautions, then the Owner may put the Work into such a condition that it shall be, in its opinion, in all respects safe, and the Contractor shall pay all expenses of such labor and materials as may have been used for this purpose by Contractor or by Owner.

The fact that the Owner or the Architect-Engineer may not observe a safety hazard or does not order the Contractor to take remedial measures, shall in no way relieve the Contractor of the entire responsibility for any costs or claims for loss, damage or injury, by or against any party sustained on account of the insufficiency of the safety precautions taken by him or by the Owner acting under authority of this Section.

5. It is the responsibility of the Contractor to take appropriate safety precautions to meet where conditions of hazard may be present during the performance of the Work, and whether or not reasonably foreseeable. The Contractor is alerted to the fact that it shall be his sole responsibility to anticipate and provide such additional safety precautions, facilities, personnel, and equipment as shall be necessary to protect life and property from whatsoever conditions of hazard are present or may be present.

1.5 USE OF HAZARDOUS MATERIALS

- A. The Contractor personnel shall not bring any hazardous substances (as defined by OSHA) onto the Site premises unless accompanied by a Safety Data Sheets (SDS). SDS' must be maintained at the Site.
- B. Contractor shall ensure all containers of hazardous materials are labeled in compliance with State and Federal OSHA regulations with the product name, appropriate hazard warnings, and the name and address of the manufacturer.
- C. Contractor shall ensure its employees are trained in the safe handling and use of hazardous materials in accordance with Title 29 CFR 1910.1200 Hazard Communication.
- D. Contractor shall ensure that all applicable employees are medically qualified (as defined by OSHA) to perform the Work assigned.
- E. Contractor shall coordinate for proper disposal of any and all hazardous materials as per details of the Pre-construction Meeting.

1.6 ADDITIONAL SAFETY POLICIES THAT WILL BE ADHERED TO THROUGHOUT THE CONSTRUCTION PHASE

- A. Seatbelts shall be utilized when operating all vehicles and heavy equipment designed to be operated in a seated position.
- B. Inspections of scaffolding prior to use, and excavations prior to entry shall be documented by the Contractor's on Site competent person. Documented inspection will be available on Site for review by the Architect-Engineer.
- C. All heavy equipment being utilized on Site shall have a fire extinguisher of suitable size/rating within reach of operator.
- D. Any fuel-powered equipment shall have a fire extinguisher of suitable size/rating no closer than ten (10) feet and no further than twenty-five (25) feet from the equipment.
- E. All electrical Work shall be done when panels/lines/boxes have been de-energized and locked out, unless otherwise approved in writing by the Architect-Engineer.
- F. An applicable sized Spill Kit shall be available where heavy equipment is being utilized.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product Delivery Requirements.
- C. Product Storage and Handling Requirements.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 30 00 Administrative Requirements
- D. Section 01 33 00 Submittal Procedures
- E. Section 01 70 00 Execution and Closeout Requirements
- F. Section 01 90 00 Reference Standards

1.3 PRODUCTS

- A. Products Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. At minimum, comply with specified requirements and Reference Standards.
- C. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
- D. Furnish products of qualified manufacturers that are suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm that manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.
- E. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

- F. Provide interchangeable components of the same manufacturer, for similar components.
- G. Asbestos products or equipment or materials containing asbestos shall not be used.

1.4 PRODUCT DELIVERY REQUIREMENTS

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

1.5 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products according to manufacturer's instructions.
- B. Store products with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
- D. For exterior storage of fabricated products, place products on sloped supports aboveground.
- E. Provide bonded off-site storage and protection when Site does not permit on Site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products; use methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Field Engineering and Surveying.
- B. Closeout Procedures.
- C. Project Record Documents.
- D. Starting of Systems.
- E. Demonstration and Instructions.
- F. Testing, Adjusting, and Balancing.
- G. Testing of Piping Systems.
- H. Operation and Maintenance Data.
- I. Manual for Materials and Finishes.
- J. Manual for Equipment and Systems.
- K. Spare Parts and Maintenance Products.
- L. Product Warranties and Product Bonds.
- M. Maintenance Service.
- N. Examination.
- O. Preparation.
- P. Execution.
- Q. Cutting and Patching.
- R. Protecting Installed Construction.
- S. Final Cleaning.

1.2 RELATED SECTIONS

- A. All Divisions and Sections referenced in this Section
- B. Division 00 Procurement and Contracting Requirements
- C. Section 01 10 00 Summary of Work
- D. Section 01 20 00 Price and Payment Procedures
- E. Section 01 25 00 Substitution Procedures
- F. Section 01 30 00 Administrative Requirements
- G. Section 01 33 00 Submittal Procedures
- H. Section 01 40 00 Quality Requirements
- I. Section 01 50 00 Temporary Facilities and Controls
- J. Section 01 50 01 Health and Safety Provisions
- K. Section 01 60 00 Product Requirements
- L. Section 01 90 00 Reference Standards

1.3 FIELD ENGINEERING AND SURVEYING

- A. Provide field engineering and surveying services (as required). Establish elevations, lines, and levels using recognized engineering and survey/layout practices.
- B. Maintain complete and accurate log of survey/layout work as Work progresses.
- C. Preserve permanent reference points during execution of Work.
- D. Promptly report to Engineer loss or destruction of reference point or relocation required because of Work.

1.4 CLOSEOUT PROCEDURES

Refer to Division 00 – Procurement and Contracting Requirements.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain on Site one (1) set of the following Project Record Documents; record actual revisions to the Work:
 - 1. Construction Plans.

- 2. Technical Specifications.
- 3. Addenda.
- 4. Change Orders and other modifications to the Contract.
- 5. Reviewed Shop Drawings, Product Data, and Samples.
- 6. Manufacturer's instruction for assembly, installation, and adjusting.
- 7. The tests, inspections, and subsequent Record Documents required by the Authority Having Jurisdiction as per the list provided to the Contractor by the Owner during the Site Mobilization Meeting.
 - a. To they extent that they were not captured in the above, certified documentation of the Special Inspections required by Code.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store Record Documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record, at each product section, description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates used.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction as follows:
 - 1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in the Work, and change orders.
 - 2. Include locations of concealed elements of the Work.
 - 3. Identify and locate existing buried or concealed items encountered during Project.
 - 4. Measured depths of foundations in relation to reference points.
 - 5. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

- 6. Field changes of dimension and detail.
- 7. Details not on original Construction Plans.

G. Record Drawings:

- 1. Submit Record Drawings that have been signed and sealed by a Professional Engineer licensed and registered in State of New York to Architect-Engineer within five (5) days of substantial completion.
- 2. The Record Drawings shall be provided for the following Construction Plans:
 - a. Cover Sheet;
 - b. Sheet C1, General Notes
 - c. Sheet C2, Existing Site Conditions & Operations Plan
 - d. Sheet A1, Code Sheet
 - e. Sheet A8, Basement Floor Plan
 - f. Sheet A9, First Floor Plan
 - g. Sheet S103, Partial Foundation Plan
 - h. Sheet S104, Partial Framing Plan at Tipping Floor
 - i. Sheet S201, Sections
 - j. Sheet S202, Sections
 - k. Sheet FP1, Fire Protection: Basement Floor Plans
 - 1. Sheet P1, Plumbing: Basement Floor Plan
 - m. Sheet P1, Plumbing: First Floor Plan
 - n. Sheet E2, Electrical: First Floor Plan
 - o. All third-party vendor/Subcontractor drawings for structures and reinforcing.
- 3. Maintain Record Drawings throughout construction.
- 4. Submit a minimum of two (2) signed and sealed prints for each Record Drawing required, along with the electronic AutoCAD files.

H. Submit PDF electronic files of Record Drawings to Architect-Engineer with Final Application for Payment.

1.6 STARTING OF SYSTEMS

- A. Coordinate schedule for startup of various equipment and systems.
- B. Notify Engineer five (5) Working Days prior to startup of each item.
- C. Verify that each piece of equipment or system has been checked for proper installation, control sequence, and for conditions which may cause damage.
- D. Verify that tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute startup under supervision of manufacturer's representative or Contractors' personnel according to manufacturer's instructions.
- G. When specified in individual Technical Specification Sections, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation prior to startup and will supervise placing equipment or system in operation.
- H. Submit a written report according to Section 01 33 00 Submittal Procedures that equipment or system has been properly installed and is functioning correctly.

1.7 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products and equipment to Owner's personnel two (2) weeks prior to Final Completion Inspection by authorized manufacturer's representatives who are knowledgeable about the Project.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season(s) within six (6) months.
- C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at designated location.

- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- F. Required instruction time for each item of equipment and system is specified in individual Technical Specification Sections.

1.8 TESTING, ADJUSTING, AND BALANCING

A. Reports will be submitted by independent firm to Engineer indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.

1.9 TESTING OF PIPING SYSTEMS

A. Unless further detailed within subsequent Sections of Technical Specifications, installed piping systems shall be tested in accordance with the below requirements.

B. Provisions:

- 1. Provide air compressor flanges, caps, bulkheads and monitoring apparatus as necessary to complete low-pressure air tests via method approved by Architect-Engineer.
- 2. Provide pump, pressure test gauge, plugs, blind flanges, and appurtenances as necessary to complete the hydrostatic tests via method approved by Architect-Engineer.

C. General Preparation for Low-pressure Air Testing:

- 1. Commence test procedures when following conditions have been met.
 - a. Pipe section to be tested is clean and free of dirt, sand or other foreign material.
 - b. Plug pipe outlets with test plugs. Brace each plug securely to prevent blowouts.
 - c. Add air slowly.
 - d. Pressurizing equipment shall include regulator set to avoid over-pressurizing and damaging otherwise acceptable line.
- 2. Provide necessary piping connections between section of line being tested and air supply, together with test pressure equipment, meters, pressure gauge, and other equipment, materials, and facilities necessary to make specified tests.
- 3. Furnish and install bulkheads, flanges, valves, bracing, blocking or other temporary sectionalizing devices that may be required.

- 4. Remove temporary sectionalizing device after tests have been completed.
- D. General Testing Equipment for Low-pressure Air Testing:
 - 1. Provide equipment for this testing procedure.
 - 2. Testing Equipment:
 - a. Required adapters as approved by the Architect-Engineer to adequately terminate both ends of section to be tested.
 - b. Temperature gauge (0°C to 100°C) tapped and threaded into blind flange.
 - c. Pressure gauge (0 to 15 psig), increment of gauge shall be 1/10 of a psi.
 - d. Inlet valve to facilitate air pressure hose.
 - e. Ball valve to release pipe pressure at test completion.
 - f. Air compressor shall provide adequate air supply for testing.
 - g. Pressurizing equipment shall include a regulator set to avoid over-pressurizing and damaging otherwise acceptable pipe.
- E. Provide verification and results of gauge calibration prior to (*less than 60 days*) and after Project completion.
- F. Test Reporting:
 - 1. Each test shall be reported in writing.
 - 2. Include following information if failure occurs:
 - a. Location of failure segment.
 - b. Nature of leaks.
 - c. Details of repairs performed.
 - d. Retest results.

1.10 OPERATION AND MAINTENANCE DATA

- A. Submit in PDF composite electronic indexed file.
- B. Submit data bound in 8-1/2 x 11-inch text pages, three (3) D side ring binders with durable plastic covers.

- C. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of Project, and subject matter of binder when multiple binders are required.
- D. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- E. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- F. Contents: Prepare table of contents for each volume, with each product or system description identified, typed on white paper, in three (3) parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions arranged by system and subdivided by Technical Specification Section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Include the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - g. Safety precautions to be taken when operating and maintaining or working near equipment.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop Drawings and Product Data.
 - b. Certificates.
 - c. Originals of warranties and bonds.

1.11 MANUAL FOR MATERIALS AND FINISHES

- A. Submit two (2) copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect-Engineer will review draft and return one (1) copy with comments.
- B. For equipment or component parts of equipment put into service during construction and operated by Owner, submit documents within ten (10) days after acceptance.
- C. Submit one (1) copy of completed volumes fifteen (15) days prior to final inspection. Draft copy to be reviewed and returned after final inspection, with Architect-Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit two (2) sets of revised final volumes within ten (10) days after final inspection.
- E. Submit in PDF composite electronic indexed file of final manual within ten (10) days after final inspection.
- F. Building Products, Applied Materials, and Finishes: Include Product Data, with catalog number, size, composition, and color and texture designations.
- G. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- H. Moisture Protection and Weather Exposed Products: Include Product Data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
- I. Additional Requirements: As specified in individual product Technical Specification Sections.
- J. Include listing in table of contents for design data, with tabbed fly sheet and space for insertion of data.

1.12 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two (2) copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect-Engineer will review draft and return one (1) copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten (10) days after acceptance.

- C. Submit one (1) copy of completed volumes fifteen (15) days prior to final inspection. Draft copy will be reviewed and returned after final inspection, with Architect-Engineer comments. Revise content of document sets as required prior to final submission.
- D. Submit two (2) sets of revised final volumes within ten (10) days after final inspection.
- E. Submit in PDF composite electronic indexed file of final manual within ten (10) days after final inspection.
- F. Each Item of Equipment and Each System: Include description of unit or system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include complete nomenclature and model number of replaceable parts.
- G. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- H. Include color-coded wiring diagrams as installed.
- I. Include manufacturer's printed operation and maintenance instructions.
- J. Include sequence of operation by controls manufacturer.
- K. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- L. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- M. Additional Requirements: As specified in individual product Technical Specification Sections.
- N. Include listing in table of contents for design data with tabbed dividers and space for insertion of data.

1.13 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual Technical Specification Sections.
- B. Deliver to Owner; obtain receipt prior to final payment.

1.14 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible Subcontractors, suppliers, and manufacturers within ten (10) days after completion of applicable item of Work.

- B. Execute and assemble transferable warranty documents and bonds from Subcontractors, suppliers, and manufacturers.
- C. Verify documents are in proper form, contain full information, and are notarized.
- D. Co-execute Submittals when required.
- E. Include table of contents and assemble in three (3) D side ring binder with heavy-duty plastic cover.
- F. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identity the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of installer.
- G. Identify each binder on the front and spine with the typed or printed title "WARRANTIES", Project name and name of Contractor.
- H. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- I. Submit prior to Final Application for Payment.
- J. Time of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten (10) days after acceptance.
 - 2. Make other Submittals within ten (10) days after date of Substantial Completion, prior to Final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within ten (10) days after acceptance, listing date of acceptance as beginning of warranty or bond period.

1.15 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in Technical Specification Sections during warranty period.
- B. Examine system components at frequency consistent with reliable operation.
- C. Do not assign or transfer maintenance service to agent or Subcontractor without prior written consent of Owner.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that existing Site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual Technical Specification Sections.
- D. Verify that utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance according to manufacturer's instructions.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 EXECUTION

- A. Comply with manufacturer's installation instructions, performing each step in sequence. Maintain one (1) set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
- B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Architect-Engineer before proceeding.
- C. Verify that field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
- D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
 - 1. Secure Work true to line and level and within specified tolerances, or if not specified, industry-recognized tolerances.

- 2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
- 3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Architect-Engineer for final decision.
- E. Allow for expansion of materials and structure movement.
- F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
 - 1. Isolate each unit of Work from incompatible Work as necessary to prevent deterioration.
 - 2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.
- G. Mounting Heights: Where not indicated, mount individual units of Work at industry recognized standard mounting heights for particular application indicated.
 - 1. Refer questionable mounting heights choices to Architect-Engineer for final decision.
 - 2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.
- H. Adjust operating products and equipment to ensure smooth and unhindered operation.
- I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction period. Lubricate operable components as recommended by manufacturer.

3.4 CUTTING AND PATCHING

- A. Employ skilled and experienced installers to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements affecting:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight-exposed elements.
 - 5. Work of Owner or separate contractor.

- C. Execute cutting, fitting, and patching including excavation and fill to complete Work and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and nonconforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical, electrical, and plumbing Work.
- D. Execute Work by methods to avoid damage to other Work and to provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new products according to requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, conduits, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.

3.5 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual Technical Specification Sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Use durable sheet materials to protect finished floors and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.

3.6 FINAL CLEANING

- A. Execute final cleaning prior to Final Completion Inspection.
 - 1. Employ experienced personnel or professional cleaning firm.
- B. In addition to the requirements of Division 00 Procurement and Contracting Requirements:

- 1. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces.
- 2. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.
- 3. Replace disposable filters and clean permanent filters in all operating equipment.
- 4. Clean exposed surfaces of diffusers, registers and grills.
- 5. Clean debris from roofs, gutters, downspouts, and drainage systems.
- 6. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
- 7. Remove all spills, stains and other foreign deposits.
- 8. Remove waste and surplus materials, rubbish, and construction tools and equipment from Site.
- 9. Remove snow and ice to provide safe access to Site and building, as applicable.

END OF SECTION

SECTION 01 90 00

REFERENCE STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality Assurance.
- B. Schedule of References.
- C. Reference Documents.

1.2 RELATED SECTIONS

- A. All Divisions and Sections of the Technical Specifications
- B. Division 00 Procurement and Contracting Requirements

1.3 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to the latest reference standard as of the date of these Contract Documents.
- C. Maintain copy at Site during submittals, planning, and progress of the specific Work, until Substantial Completion.
- D. Should specified reference standards conflict with Contract Documents, request clarification from Architect-Engineer before proceeding.
- E. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 SCHEDULE OF REFERENCES

AA The Aluminum Association

1400 Crystal Drive Arlington, VA 22202

AASHTO American Association of State Highway

and Transportation Officials 55512th Street NW, Ste. 1000 Washington, DC 20004

ACI American Concrete Institute

38800 Country Club Drive

Farmington Hills, MI 48331-3439

AGC Associated General Contractors of America

2300 Wilson Blvd., Suite 300

Arlington, VA 22201

AI Asphalt Institute

2696 Research Park Drive Lexington, KY 40511-8480

AIA American Institute of Architects

1735 New York Avenue, N.W.

Washington, DC 20006

AISC American Institute of Steel Construction

130 East Randolph

Suite 2000

Chicago, IL 60601

AISI American Iron and Steel Institute

25 Massachusetts Avenue

NW, Suite 800

Washington, DC 20001

ANSI American National Standards Institute

25 West 43rd Street New York, NY 10036

ASTM American Society for Testing and Materials

100 Barr Harbor Drive

P.O. Box C700

West Conshohocken, PA 19428-2959

AWS American Welding Society

8669 NW 36 Street, #130 Miami, FL 33166-6672

CLFMI Chain Link Fence Manufacturers Institute

10015 Old Columbia R, Ste. B215

Columbia, MD 21046

CRSI Concrete Reinforcing Steel Institute

933 North Plum Grove Road Schaumburg, IL 60195-4758

EJCDC Engineers' Joint Contract Documents Committee

American Consulting Engineers Council

1015 15th Street, N.W., 8th Floor

Washington, DC 20005

EJMA Expansion Joint Manufacturers Association

25 North Broadway Tarrytown, NY 10591

GSI Geosynthetic Institute

475 Kedron Avenue Folsom, PA 19033

ICBO International Code Conference

500 New Jersey Avenue, 6th Floor

Washington, DC 20001

IEEE Institute of Electrical and Electronics Engineers

3 Park Avenue, 17th Floor New York, NY 10016-5997

NEMA National Electrical Manufacturers' Association

1300 17th St. N #900 Arlington, VA 22209

NFPA National Fire Protection Association

Battery March Park Quincy, MA 02269

NIST National Institute of Standards and Technology

Headquarters 100 Bureau Drive

Gaithersburg, MD 20899

OSHA Occupational Safety and Health Administration

U.S. Department of Labor 200 Constitution Avenue NW Washington, DC 20210 PCA Portland Cement Association

5420 Old Orchard Road

Skokie, IL 60077

PCI Precast/Prestressed Concrete Institute

8770 W. Bryn Mawr Ave, Ste. 1150

Chicago, IL 60631

PPI Plastics Pipe Institute

105 Decker Ct. #825

Irving, TX 75062

SSPC Steel Structures Painting Council

800 Trumbull Drive Pittsburgh, PA 15205

UL Underwriters' Laboratories, Inc.

2500 Dundee Road Northbrook, IL 60062

1.5 REFERENCE DOCUMENTS

- A. The following documents are incorporated by reference and made part of these Technical Specifications. All provisions of these documents except as noted herein shall apply.
 - 1. New York State Department of Environmental Conservation, 6 NYCRR Part 360, Solid Waste Management Facilities Title 6 of the Official Compilation of Codes, Rules and Regulations.
 - 2. New York State Standards and Specifications for Erosion and Sediment Control, November 2016.
 - 3. 2020 Building Code of New York State.
 - 4. 2020 Energy Conservation Code of New York State.
 - 5. 2020 Fire Code of New York State.
 - 6. 2020 Plumbing Code of New York State.
 - 7. 2020 Mechanical Code of New York State.
 - 8. 2020 Energy Conservation Construction Code of New York State.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

DIVISION 02 – EXISTING CONDITIONS

SECTION 024119

SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Demolition and removal of selected portions of building or structure.
- 2. Salvage of existing items to be reused or recycled.

B. Related Requirements:

- 1. Division 01 Section 01 10 00 "Summary of Work" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
- 2. Division 01 Section 01 70 00 "Execution and Closeout Requirements" for cutting and patching procedures.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed, and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project Site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of elevator and stairs.
 - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs or Video: Submit before Work begins.
- D. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

1.7 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect/Engineer of discrepancies between existing conditions and Contract Documents before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. Hazardous materials will be removed by Owner before start of the Work.
 - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect/Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.9 WARRANTY

A. Notify warrantor on completion of selective demolition and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations and those of the authorities having jurisdiction before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 **EXAMINATION**

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate, and measure the nature and extent of conflict. Promptly submit a written report to Architect/Engineer and Owner.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section 01 10 00 "Summary of Work".
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated Facility services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and electrical systems, equipment, and components indicated to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - c. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Comply with requirements for access and protection specified in Division 01 Section 01 50 00 "Temporary Facilities and Controls."
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section 01 50 00 "Temporary Facilities and Controls."
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering, and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

- 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
- 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
- 5. Maintain adequate ventilation when using cutting torches.
- 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
- 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
- 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 9. Dispose of demolished items and materials promptly.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect/Engineer, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.
- B. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.
- C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.
- D. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA and State approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.

- 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

DIVISION 05 - METALS

SECTION 051200

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Construction Plans and general provisions of the Contract Documents, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Structural steel.
- B. Related Sections:
 - 1. Division 01 Section 01 40 00 "Quality Requirements" for independent testing agency procedures and administrative requirements.

1.3 DEFINITIONS

- A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."
- B. Seismic-Load-Resisting System: Elements of structural-steel frame designated as "SLRS" or along grid lines designated as "SLRS" on Drawings, including columns, beams, and braces and their connections.
- C. Heavy Sections: Rolled and built-up sections as follows:
 - 1. Shapes included in ASTM A 6/A 6M with flanges thicker than 1-1/2 inches (38 mm).
 - 2. Welded built-up members with plates thicker than 2 inches (50 mm).
 - 3. Column base plates thicker than 2 inches (50 mm).
- D. Protected Zone: Structural members or portions of structural members indicated as "Protected Zone" on Drawings. Connections of structural and nonstructural elements to protected zones are limited.

E. Demand Critical Welds: Those welds, the failure of which would result in significant degradation of the strength and stiffness of the Seismic-Load-Resisting System and which are indicated as "Demand Critical" or "Seismic Critical" on Drawings.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.
 - 5. Identify members and connections of the seismic-load-resisting system.
 - 6. Indicate locations and dimensions of protected zones.
 - 7. Identify demand critical welds.
 - 8. For structural-steel connections indicated to comply with design loads, include structural design data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code Steel," for each welded joint qualified by testing, including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- D. Qualification Data: For qualified Installer, fabricator, and testing agency.
- E. Welding certificates.
- F. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- G. Mill test reports for structural steel, including chemical and physical properties.
- H. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Direct-tension indicators.
 - 3. Tension-control, high-strength bolt-nut-washer assemblies.
 - 4. Shear stud connectors.

- 5. Shop primers.
- 6. Nonshrink grout.
- I. Source quality-control reports.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD.
- B. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category ACSE.
- C. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
- D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code Steel."
 - 1. Welders and welding operators performing work on bottom-flange, demand-critical welds shall pass the supplemental welder qualification testing, as required by AWS D1.8. FCAW-S and FCAW-G shall be considered separate processes for welding personnel qualification.
- E. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 341 and AISC 341s1.
 - 3. AISC 360.
 - 4. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- F. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.

- 1. Fasteners may be repackaged provided Contractor's independent testing and inspecting agency observes repackaging and seals containers.
- 2. Clean and relubricate bolts and nuts that become dry or rusty before use.
- 3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

1.7 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes: ASTM A 992 ASTM A 572, Grade 50 ASTM A 529, Grade 50.
- B. Channel and Angle-Shapes: ASTM A 36.
- C. Plate and Bar: ASTM A 36.
- D. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
- E. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C, heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers; all with plain finish.
 - 1. Direct-Tension Indicators: ASTM F 959, Type 325 , compressible-washer type with plain finish.
- B. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- C. Headed Anchor Rods: ASTM F 1554, Grade 36, straight.
 - 1. Nuts: ASTM A 563 heavy-hex carbon steel.

- 2. Plate Washers: ASTM A 36/A 36M carbon steel.
- 3. Washers: ASTM F 436, Type 1, hardened carbon steel.
- 4. Finish: Plain.
- D. Threaded Rods: ASTM A 36.
 - 1. Nuts: ASTM A 563 heavy-hex carbon steel.
 - 2. Washers: ASTM F 436, Type 1, hardened or ASTM A 36 carbon steel.
 - 3. Finish: Plain.

2.3 PRIMER

A. Primer: Fabricator's standard lead- and chromate-free, non-asphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.

2.4 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive and non-staining, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.
 - 1. Camber structural-steel members where indicated.
 - 2. Fabricate beams with rolling camber up.
 - 3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
 - 4. Mark and match-mark materials for field assembly.
 - 5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- C. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

- E. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 3, "Power Tool Cleaning."
- F. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.
- G. Steel Wall-Opening Framing: Select true and straight members for fabricating steel wall-opening framing to be attached to structural steel. Straighten as required to provide uniform, square, and true members in completed wall framing.
- H. Welded Door Frames: Build up welded door frames attached to structural steel. Weld exposed joints continuously and grind smooth. Plug-weld fixed steel bar stops to frames. Secure removable stops to frames with countersunk machine screws, uniformly spaced not more than 10 inches (250 mm) o.c. unless otherwise indicated.
- I. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 - 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Pretensioned.
- B. Weld Connections: Comply with AWS D1.1 for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.

2.7 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
 - 1. Surfaces to be field welded.
 - 2. Surfaces to be high-strength bolted with slip-critical connections.

- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
 - 1. SSPC-SP 2, "Hand Tool Cleaning."
 - 2. SSPC-SP 3, "Power Tool Cleaning."
 - 3. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
 - 4. SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
 - 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
 - 2. Apply two coats of shop paint to surfaces that are inaccessible after assembly or erection. Change color of second coat to distinguish it from first.
- D. Painting: Prepare steel and apply a one-coat, non-asphaltic primer complying with SSPC-PS Guide 7.00, "Painting System Guide 7.00: Guide for Selecting One-Coat Shop Painting Systems," to provide a dry film thickness of not less than 1.5 mils (0.038 mm).

2.8 GALVANIZING

- A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.
 - 1. Fill vent and drain holes that will be exposed in the finished Work unless they will function as weep holes, by plugging with zinc solder and filing off smooth.
 - 2. Galvanize lintels attached to structural-steel frame and located in exterior walls.

2.9 SOURCE QUALITY CONTROL

- A. Testing Agency: Contractor will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.
 - 1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- C. Bolted Connections: Shop-bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

- D. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - 1. Liquid Penetrant Inspection: ASTM E 165.
 - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - 3. Ultrasonic Inspection: ASTM E 164.
 - 4. Radiographic Inspection: ASTM E 94.
- E. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Bend tests will be performed if visual inspections reveal either a less-thancontinuous 360-degree flash or welding repairs to any shear connector.
 - 2. Tests will be conducted on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 - 1. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Base Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Pretension anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."
- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
 - 2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection.
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
- H. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.

3.4 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Pretensioned.

- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
 - 1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
 - 2. Remove backing bars or runoff tabs, back gouge, and grind steel smooth.
 - 3. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances in AISC's "Code of Standard Practice for Steel Buildings and Bridges" for mill material.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.
- B. Bolted Connections: Bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.
 - 1. In addition to visual inspection, field welds will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.
- D. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.
- E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.
- B. Touchup Painting: Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
- C. Touchup Painting: Cleaning and touchup painting are specified in Division 09 painting Sections.

END OF SECTION

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

SECTION 07 92 00 JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Self-leveling pourable joint sealants.
- B. Joint backings and accessories.

1.02 REFERENCE STANDARDS

- A. ASTM D624 Tear Strength Testing of Rubbers and Elastomers
- B. ASTM D638 Standard Test Method for Tensile Properties
- C. ASTM D1640 Standard Test Method for Drying, Curing or Film Formation of Organic Coatings.
- D. ASTM D4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
- E. ASTM C661 Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer 2015.
- F. ASTM C919 Standard Practice for Use of Sealants in Acoustical Applications 2018.
- G. ASTM C920 Standard Specification for Elastomeric Joint Sealants 2018.
- H. ASTM C1193 Standard Guide for Use of Joint Sealants 2016.
- I. ASTM C1248 Standard Test Method for Staining of Porous Substrate by Joint Sealants 2018.
- J. ASTM C1311 Standard Specification for Solvent Release Sealants 2014.
- K. ASTM D2240 Standard Test Method for Rubber Property--Durometer Hardness 2015 (Reapproved 2021).
- L. SCAQMD 1168 Adhesive and Sealant Applications 1989 (Amended 2017).

1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.

1.04 WARRANTY

- A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

A. Scope:

- 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
- 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths.
 - Exception: Such gaps and openings in gypsum board and plaster finished stud walls and suspended ceilings.
 - Exception: Through-penetrations in sound-rated assemblies that are also firerated assemblies.
 - c. Other joints indicated below.
- 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - Joints where sealant is specified to be provided by manufacturer of product to be sealed
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Interior Wet Areas: Bathrooms, restrooms, kitchens, food service areas, and food processing areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.
- C. Sound-Rated Assemblies: Walls and ceilings identified as "STC-rated", "sound-rated", or "acoustical".

2.02 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.
- B. Colors: As indicated on drawings.

2.03 SELF-LEVELING SEALANTS

- A. (07.9200.12) VersaFlex SL/75 is a semi-rigid self-leveling Polyurea joint filler
- B. VersaFlex SL/75 is a semi-rigid self-leveling Polyurea joint filler used to fill interior random cracks, control joints, or new construction joints on horizontal concrete surfaces.
- C. Semi-Rigid Self-Leveling Polyurea Joint Filler: Two-component, 100 percent solids; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.
 - SL/75 is designed specifically for industrial floor applications receiving heavy vehicle traffic, such a forklift or steel wheeled carts. SL/75 is flexible, accommodating to small slab movement yet strong enough to protect the vertical edges of concrete from spalling under extreme loading. SL/75 can be used in exterior applications where little joint or crack

movement from thermal cycling will occur. SL/75 is recommended for repair of cracks, damaged control joints or new construction joints in cold storage facilities, freezers, and food processing plants where time and temperature are serious considerations.

2. Physical Properties:

Mix Ratio	1:1
VOC	0
Gel Time, ASTM D1640	~ 1 Minute
Tack Free, ASTM D1640	2 - 3 Minutes
Open to Foot Traffic, ASTM D1640	60 Minutes
Tensile Strength (psi) ASTM D638	600 - 1200
Tensile Elongation (%) ASTM D638	240 - 500
Modulus of Elasticity (psi) ASTM D638	400 - 900
Adhesion to concrete (psi) ASTM D4541	300 - 450
Tear Strength (lb/in) ASTM D624	150 - 300
Shore A Hardness ASTM D2240	≥ 75
Tabor Abrasion, mg wt loss; (1000g, 1000 revs, H-18) ASTM D4060	375 - 500

- 3. Durometer Hardness, Type A: 75, minimum, after seven days when tested in accordance with ASTM D2240.
- 4. Color: To be selected by Architect from manufacturer's standard colors.
- Manufacturers:
 - a. Versa Flex, Inc.; VersaFlex S/L 75: www.versaflex.com
 - b. Substitutions: See Section 01 60 00 Product Requirements.
- D. (07.9200.13) Polyurethane-Methacrylate (PUMA) Expansion Joint System
- E. Polyurethane-Methacrylate (PUMA) Expansion Joint System: Intended for expansion joints in exposed multi-story parking garages, and includes aluminum tape, primer, joint compound material, and top coat.
 - Durometer Hardness, Shore A: 65 to 87, minimum, when tested in accordance with ASTM D2240.
 - 2. Color: To be selected by Architect from manufacturer's standard colors.
 - 3. Manufacturers:
 - a. Tremco Commercial Sealants & Waterproofing; Tremco PUMA Expansion Joint System (EJS): www.tremcosealants.com/#sle.
 - b. Substitutions: See Section 01 60 00 Product Requirements.

2.04 ACCESSORIES

- A. (07.9200.14) Backer Rod: Cylindrical cellular foam rod
- B. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
 - Manufacturers:
 - a. ADFAST Corporation; ADSEAL BR-2600 (Backer Rod): www.adfastcorp.com/#sle.
 - b. Nomaco, Inc: www.nomaco.com/#sle.
 - c. Substitutions: See Section 01 60 00 Product Requirements.
- C. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that joints are ready to receive work.

- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.
- G. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

END OF SECTION

DIVISION 08 - OPENINGS

SECTION 08 33 23 OVERHEAD COILING DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Rolling steel doors.

1.02 RELATED SECTIONS

A. Division 26 -- Electrical

1.03 REFERENCES

- A. ANSI/DASMA 108 American National Standards Institute Standard Method For Testing Sectional Garage Doors And Rolling Doors: Determination Of Structural Performance Under Uniform Static Air Pressure Difference.
- B. ANSI/DASMA 203 American National Standards Institute Specifications for non-rated fire rolling doors published by Door & Access Systems Manufacturers Association International.
- C. ASTM A 123 Zinc hot-dipped galvanized] coatings on iron and steel products.
- D. ASTM A 229 Steel wire, oil-tempered for mechanical springs.
- E. ASTM A 653 Steel sheet, zinc-coated galvanized by the hot-dipped process, commercial quality.
- F. ASTM E 330 Structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.
- G. ASTM E 413 Classification for Rating Sound Insulation

1.04 SUBMITTALS

- A. Submit under provisions of Division 1
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- G. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking, adjustment and lubrication of components.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years' experience in the fabrication and installation of security closures.
- B. Installer Qualifications: Installer Qualifications: Company specializing in performing Work of this section with minimum three years and an authorized Wayne Dalton installer.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - Finish areas designated by Architect.

- Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
- 3. Refinish mock-up area as required to produce acceptable work.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Store products in manufacturer's unopened packaging with seals and labels intact until ready for installation.
- B. Store materials off the ground in a dry, warm, ventilated weathertight location.

1.07 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.08 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.09 WARRANTY

- A. Provide Rolling Steel Service doors and Rolling Steel Fire doors with limited 2 Year Warranty on defects in materials and workmanship on the door; excludes the counterbalance spring and finish.
- B. Provide rolling steel Advanced Performance service doors with limited 5 Year Warranty on all doors system materials and workmanship.
- C. Provide Aluminum Security Shutters, Model 523 with limited 2 Year Warranty on defects in materials and workmanship on the door and components. Provide Powder Coat Finish with a 2 years warranty against excessive fading, cracking, blistering, flaking or peeling.

PART 2 PRODUCTS

2.01 OVERHEAD COILING DOORS -- PRODUCTS

A. (08.3322.02) Wayne Dalton Model 800 Rolling Service Doors:

2.02 MANUFACTURERS

- A. Acceptable Manufacturer: Wayne Dalton; 2501 S. State Highway 121 Business, Suite 200, Lewisville, TX 75067. ASD. Phone: (800) 827-3667; Web Site: www.wayne-dalton.com. Email: info@wayne-dalton.com.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

2.03 ROLLING STEEL SERVICE DOORS

- A. Wayne Dalton Model 800 Rolling Service Doors:
 - 1. Description:
 - a. Maximum Width: 40 feet
 - 1) Maximum Height: 40 feet
 - b. Curtain: composed of interlocking roll-formed slats.
 - 1) Slat Profiles/Material:
 - (a) No. 14 Flat-faced slat.
 - (1) 16-gauge steel.
 - 2) Ends of alternate slats fitted with metal endlocks/windlocks.
 - c. Bottom Bar: Consists of two equal angles, 0.12 inch minimum thickness, to stiffen curtain, with astragal. Angle shall be:
 - 1) Steel.
 - d. Guides:

- Roll-formed steel channel bolted to three structural angle guide angle assembly forming a slot to retain curtains in guides. Structural grade, three angle assembly fabricated of:
 - (a) Steel.
- 2) Provide with integral windlock bars and removable bottom bar stops.
- e. Brackets: Design to enclose ends of coil and provide support for counterbalance pipe at each end. Fabricate of steel plates, with permanently sealed ball bearings. Thickness shall be:
 - 1) 3/16 inch minimum.
- f. Counterbalance: Curtain to be coiled on a pipe of sufficient size to carry door load with deflection not to exceed 0.033 inch per foot of door span. Curtain to be correctly balanced by helical springs, oil tempered torsion type. Cast iron barrel plugs will be used to anchor springs to tension shaft and pipe.
- g. Hood: Hood to enclose curtain coil and counterbalance mechanism. Hood fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provide longitudinal stiffness. Fabricate of:
 - Minimum 24-gauge galvanized steel.
- h. Finish: Shop coat of rust inhibitive primer on non-galvanized surfaces and operating mechanisms. Guides and bracket plates will be coated with a flat black prime paint.
 - 1) Galvanized Steel:
 - (a) Powdercoat finish as selected from manufacturer's RAL color selections.
- i. Operation: Door will be operated by means of:
 - 1) Motor operation with electrical sensing edge attached to bottom bar to stop and reverse door when it contacts an object during the closing cycle.
- j. Motor: Without brake, with 4 poles, controlled by a variable speed drive. Power: 2 HP (larger than 18 sq yd [15 sq m]). Protection degree NEMA 4.
- k. Gearbox: Sized for a motor of 1 HP and gear reduction ratio 1/7.
- I. Door Positioning: Absolute encoder mounted within the drive unit.
- m. Power Supply: Three phase 460 VAC.
- Frequency: 50-60 Hz. Circuit breakers to be provided by the customer: 10 A for a motor of 1 HP.
- o. Detectors:
 - An infrared photocell installed inside the side guide and detecting the presence of a pedestrian or a vehicle. Upon activation, it opens the door immediately and keeps it open as long as the presence is detected.
 - 2) Height of photocell: 12 inches (305 mm) from the floor.
 - 3) A bottom edge detector opens the door when it hits an obstacle during the closing cycle. This detector is positioned at the bottom part of the curtain.
- Space Requirements: All indicated dimensions are net: the additional space necessary for mounting and maintenance has to be taken into account. Reduced dimensions upon request. Refer to drawings.
- Weatherstripping: Bottom astragal, optional surface guide weatherstrip, and internal hood baffle.
- 4. Locking:
 - a. Interior slide-bolts suitable for padlocks by others.

3 of 4

- Electric-motor operation doors provided with lock through the operator gearing.
- b. Windload: Windload minimum 115 psf per DASMA 102-2012 and as required by local codes.
- c. Mounting:
 - 1) Steel jambs.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install rolling fire doors in accordance with the manufacturer's instructions and in accordance with the requirements of the National Fire Protection Association Standard 80 (NFPA 80).
- C. Install door complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports in accordance with final shop drawings, manufacturers instructions, and as specified herein.
- D. Fit, align and adjust rolling door assemblies level and plumb for smooth operation.
- E. Upon completion of final installation, lubricate, test and adjust doors to operate easily, free from warp, twist or distortion and fitting for entire perimeter.

3.04 TESTING

A. Drop-test rolling steel fire doors in accordance with NFPA 80 and witnessed, attesting to their successful operation at the time of installation.

3.05 MAINTENANCE

A. Per NFPA 80, paragraph 15-2 4.3: All horizontal or vertical sliding and rolling fire doors shall be inspected and tested annually to check for proper operation and full closure. Resetting of the release mechanism shall be done in accordance with the manufacturers instructions. A written record shall be maintained by the building owner and made available to the authority having jurisdiction.

3.06 ADJUSTING

- Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.07 CLEANING

- Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

3.08 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION



SECTION 11 81 29

PRE-ENGINEERED OSHA COMPLIANT NON-PENETRATING GUARDRAIL SYSTEM AND ASSOCIATED SAFETY SIGNAGE

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Contractor shall furnish all labor, material, equipment, tools and appurtenances necessary to complete the work of supply and installation of a Pre-engineered OSHA Compliant Non-Penetrating Guardrail System as shown, specified or required in the Construction Plans. The Guardrail System shall be compliant with all OSHA 1910 and OSHA 1926 Subpart M regulations when placed in accordance with surface conditions and location depicted within the Construction Plans.
- 2. Contractor shall furnish all labor, material, equipment, tools and appurtenances necessary to complete the work of supply and installation of Safety Signage as shown, specified or required in the Construction Plans.
- 3. The Contractor shall furnish and install the appurtenant work as indicated in the Construction Plans and as specified herein, or as reasonably required to produce a complete, proper, and functional installation in accordance with the intent of the Contract Documents, Construction Plans, and Technical Specifications.

1.2 **DEFINITIONS**

A. OSHA – Occupational Safety and Health Administration.

1.3 REFERENCES

A. Not Used.

1.4 COORDINATION

A. Section 01 30 00 – Administrative Requirements specifies requirements for coordination.

1.5 SUBMITTALS

- A. Submit shop drawings, fly sheets and specifications detailing all aspects of the guardrail system, non-penetrating baseplates, out-riggers, and fasteners including section dimensions, configuration, material of construction, and finishes to the Architect-Engineer for approval.
- B. Submit shop drawings indicating the proposed safety signage material of construction, size, color, content and size of lettering to Architect-Engineer for approval.

1.6 QUALITY ASSURANCE

- A. Not Used
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Not Used.

PART 2 PRODUCTS

- A. The Pre-engineered OSHA Compliant Non-Penetrating Guardrail System shall be a preengineered system compliant with all OSHA 1910 and OSHA 1926 Subpart M regulations as manufactured by Guardian Fall Protection or Kent, WA or approved equivalent.
- B. Safety Signage shall be of steel construction and of suitable finish for the application intended subject to the approval of the Architect-Engineer.
- C. PART 3 EXECUTION
- A. Not Used.

END OF SECTION

DIVISION 21 – FIRE SUPPRESSION

SECTION 21 05 00

COMMON WORK RESULTS FOR FIRE SUPPRESSION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 WORK INCLUDED

- A. The installation of the complete, operational and tested automatic fire sprinkler system, including head locations, pipe, fittings, valves, connections, risers, building piping, shall be performed by Contractors currently experienced in this work and having five continuous years of experience herein. The Contractor shall furnish shop drawings based on this Engineer's permitted Bid Documents. These shop drawings shall include additional information to include, but not be limited to, dimensional information, elevations, elevation rises and drops, and adjustments necessary to coordinate the fire sprinkler piping with the building, building structure and equipment/materials of other trades.
- B. Fire Sprinkler Contractor shall review the information contained herein and shall prepare complete fire system installation shop drawings coinciding with hydraulic calculations sealed by a NYS Registered Professional Engineer experienced in the field. The design and details shall conform to NFPA 13, and all local codes and regulations. The Fire Protection Contractor shall be required to provide detailed fire protection construction drawings to be signed and sealed by a NYS Registered Professional Engineer acting as the Delegated Engineer to the Prime Engineer as a part of this scope. These documents shall be considered the Fire Protection System Engineering Documents. Copies of signed and sealed construction drawings shall be submitted to this office for review and comment. When approval is achieved, the Contractor shall submit the necessary number of copies of signed and sealed drawings to Authorities Having Jurisdiction for review and approval.
- C. The intent for the design and installation for the automatic fire sprinkler is to be fully sprinklered within the spaces noted on the drawings. Any exceptions to this (i.e., elevator equipment room, etc.) shall be approved in writing (prior to submission of permit drawings) by the Authority Having Jurisdiction.
- D. This Contractor's shop drawings shall be coordinated with ceilings, air devices, lighting, structural members, etc. The Contractor shall align the sprinkler heads within the center of ceiling tiles. All sprinkler heads in rooms with ceilings shall be concealed type. Any sprinkler heads shown on the performance criteria drawings are to indicate design intent. The Contractor's shop drawings shall be required to comply with the design intent. In certain areas it may be required to install more heads that required by code minimum in order to achieve the ceiling symmetry established in the design intent

drawings.

E. Contractor shall furnish a new flow test at any time during the construction of the project if requested in writing by the Authority Having Jurisdiction and/or Engineer of Record.

1.3 SUMMARY

- A. This Section includes the following:
 - 1. Piping materials and installation instructions common to most piping systems.
 - 2. Mechanical sleeve seals.
 - 3. Sleeves.
 - 4. Escutcheons.
 - 5. Grout.
 - 6. Equipment installation requirements common to equipment sections.
 - 7. Painting and finishing.
 - 8. Concrete bases.
 - 9. Supports and anchorages.

1.4 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspaces, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in chases.
- E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.

1.5 SUBMITTALS

- A. Product Data: For the following:
 - 1. Mechanical sleeve seals.

2. Sprinkler heads.

1.6 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."
- B. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
 - 1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
 - 2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.

1.8 COORDINATION

- A. Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction, to allow for fire-suppression installations.
- B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.
- C. Coordinate requirements for access panels and doors for fire-suppression items requiring access that are concealed behind finished surfaces. Access panels and doors are specified in Division 08 Section "Access Doors and Frames."

1.9 CLOSE-OUT DOCUMENTS

- A. This Contractor shall furnish Operating and Maintenance (O&M) manuals and As-built drawings before final payment will be issued.
 - 1. O&M manuals shall be submitted in accordance with Division 1, General Requirements, and shall consist of the following (at a minimum):
 - a. All Contractor and Manufacturer warranties.
 - b. List of Contractors and Parts and Equipment Suppliers—complete with contact person, proper company name, address, and telephone numbers.
 - c. Parts list for supplied equipment—including a checklist of recommended components to be stocked on-site.
 - d. Maintenance and replacement parts manuals.
 - e. Start-up and shutdown operating instructions.

- f. Manufacturer's literature describing the equipment, which shall include wiring diagrams and operating specifications.
- g. Control system sequence of operation, system diagram, and backup disks of the system configuration.
- h. Sign-in sheet for Owner's training.
- 2. Fire hydrant flow test report.
- 3. Approval letter from authority having jurisdiction.
- 4. Electronic copy of Close-Out Documents saved in PDF format on compact disk.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 PIPE, TUBE, AND FITTINGS

- A. Refer to individual Division 21 piping Sections for pipe, tube, and fitting materials and joining methods.
- B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

2.3 JOINING MATERIALS

A. Refer to individual Division 21 piping Sections for special joining materials not listed below.

PART 3 EXECUTION

3.1 PIPING SYSTEMS—COMMON REQUIREMENTS

- A. Install piping according to the following requirements and Division 21 Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- C. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- D. Install piping indicated to be exposed and piping in equipment rooms and service areas at

- right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- E. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- F. Install piping to permit valve servicing.
- G. Install piping at indicated slopes.
- H. Install piping free of sags and bends.
- I. Install fittings for changes in direction and branch connections.
- J. Install piping to allow application of insulation.
- K. Select system components with pressure rating equal to or greater than system operating pressure.
- L. Install escutcheons for penetrations of walls, ceilings, and floors according to the following:
 - 1. New Piping:
 - a. Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with polished chrome-plated finish.
 - b. Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece or split-casting, cast-brass type with polished chrome-plated finish.
- M. Install sleeves for pipes passing through concrete and masonry walls, gypsum-board partitions, and concrete floor and roof slabs.

3.2 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and Division 21 Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded

or damaged. Do not use pipe sections that have cracked or open welds.

E. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

3.3 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor fire-suppression materials and equipment.
- B. Field Welding: Comply with AWS D1.1.

END OF SECTION

SECTION 21 13 16

DRY-PIPE SPRINKLER SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Pipes, fittings, and specialties.
 - 2. Fire-protection valves.
 - 3. Sprinkler specialty pipe fittings.
 - 4. Sprinklers.

1.3 DEFINITIONS

A. Standard-Pressure Sprinkler Piping: Dry-pipe sprinkler system piping designed to operate at working pressure 175 psig maximum.

1.4 SYSTEM DESCRIPTIONS

A. Dry-Pipe Sprinkler System: Automatic sprinklers are attached to piping containing compressed air. Opening of sprinklers releases compressed air and permits water pressure to open dry-pipe valve. Water then flows into piping and discharges from sprinklers that are open.

1.5 PERFORMANCE REQUIREMENTS

- A. Standard-Pressure Piping System Component: Listed for 175-psig minimum working pressure.
- B. Sprinkler system design shall be approved by authorities having jurisdiction.
 - 1. Margin of Safety for Available Water Flow and Pressure: 10 percent, including losses through water-service piping, valves, and backflow preventers.
 - 2. Sprinkler Occupancy Hazard Classifications:
 - a. Tipping Floor, Transfer Trailer Station: Ordinary-Hazard Group II.
 - 3. Minimum Density for Automatic-Sprinkler Piping Design:

- a. Ordinary-Hazard, Group II Occupancy: 0.2 gpm over 1500 sq. ft. area.
- 4. Maximum Protection Area per Sprinkler: Per UL listing.

1.6 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For dry-pipe sprinkler systems. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Wiring Diagrams: For power, signal, and control wiring.
- C. Delegated-Design Submittal: For sprinkler systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional NYS licensed engineer responsible for their preparation.
- D. Coordination Drawings: Sprinkler systems, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
 - 1. Domestic water piping.
 - 2. Items penetrating finished ceiling including the following:
 - a. Lighting fixtures.
 - b. Air outlets and inlets.
 - c. Fire Alarm Devices.
- E. Approved Sprinkler Piping Drawings: Working plans, prepared according to NFPA 13, that have been approved by authorities having jurisdiction, including hydraulic calculations if applicable.
- F. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping."
- G. Field quality-control reports.
- H. Operation and Maintenance Data: For sprinkler specialties to include in emergency, operation, and maintenance manuals.

1.7 QUALITY ASSURANCE

A. Installer Qualifications:

- 1. Installer's responsibilities include designing, fabricating, and installing sprinkler systems and providing professional engineering services needed to assume engineering responsibility. Base calculations on results of fire-hydrant flow test.
 - a. Engineering Responsibility: Preparation of working plans, calculations, and field test reports by a qualified professional engineer.
- B. NFPA Standards: Sprinkler system equipment, specialties, accessories, installation, and testing shall comply with the following:
 - 1. NFPA 13, "Installation of Sprinkler Systems."

1.8 COORDINATION

A. Coordinate layout and installation of sprinklers with other construction that penetrates ceilings, including light fixtures, HVAC equipment, and partition assemblies.

PART 2 PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, and fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.2 STEEL PIPE AND FITTINGS

- A. Standard Weight, Galvanized-Steel Pipe: ASTM A 53/A 53M. Pipe ends may be factory or field formed to match joining method.
- B. Thinwall Galvanized-Steel Pipe: ASTM A 135 or ASTM A 795/A 795M, threadable, with wall thickness less than Schedule 30 and equal to or greater than Schedule 10. Pipe ends may be factory or field formed to match joining method.
- C. Galvanized-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M, standard-weight, seamless steel pipe with threaded ends.
- D. Galvanized, Steel Couplings: ASTM A 865, threaded.
- E. Galvanized, Gray-Iron Threaded Fittings: ASME B16.4, Class 125, standard pattern.
- F. Malleable- or Ductile-Iron Unions: UL 860.
- G. Cast-Iron Flanges: ASME B16.1, Class 125.
- H. Grooved-Joint, Steel-Pipe Appurtenances:
 - 1. Pressure Rating: 175 psig minimum.

- 2. Galvanized, Grooved-End Fittings for Steel Piping: ASTM A 47/A 47M, malleable-iron casting or ASTM A 536, ductile-iron casting; with dimensions matching steel pipe.
- 3. Grooved-End-Pipe Couplings for Steel Piping: AWWA C606 and UL 213, rigid pattern, unless otherwise indicated, for steel-pipe dimensions. Include ferrous housing sections, EPDM-rubber gasket, and bolts and nuts.

2.3 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, 1/8 inch thick.
 - 1. Class 125, Cast-Iron and Class 150, Bronze Flat-Face Flanges: Full-face gaskets.
 - 2. Class 250, Cast-Iron and Class 300, Raised-Face Flanges: Ring-type gaskets.
- B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.

2.4 SPRINKLER SPECIALTY PIPE FITTINGS

- A. General Requirements for Dry-Pipe-System Fittings: UL listed for dry-pipe service.
- B. Branch Outlet Fittings:
 - 1. Standard: UL 213.
 - 2. Pressure Rating: 175 psig minimum.
 - 3. Body Material: Ductile-iron housing with EPDM seals and bolts and nuts.
 - 4. Type: Mechanical-T and cross fittings.
 - 5. Configurations: Snap-on and strapless, ductile-iron housing with branch outlets.
 - 6. Size: Of dimension to fit onto sprinkler main and with outlet connections as required to match connected branch piping.
 - 7. Branch Outlets: Grooved, plain-end pipe, or threaded.
- C. Adjustable Drop Nipples:
 - 1. Standard: UL 1474.
 - 2. Pressure Rating: 250 psig minimum.
 - 3. Body Material: Steel pipe with EPDM O-ring seals.
 - 4. Size: Same as connected piping.

- 5. Length: Adjustable.
- 6. Inlet and Outlet: Threaded.

2.5 FIRE-DEPARTMENT CONNECTIONS

- A. Exposed-Type, Fire-Department Connection:
 - 1. Standard: UL 405.
 - 2. Type: Exposed, projecting, for wall mounting.
 - 3. Pressure Rating: 175 psig (1200 kPa) minimum.
 - 4. Body Material: Corrosion-resistant metal.
 - 5. Inlets: Brass with threads according to NFPA 1963 and matching local firedepartment sizes and threads. Include extension pipe nipples, brass lugged swivel connections, and check devices or clappers.
 - 6. Caps: Brass, lugged type, with gasket and chain.
 - 7. Escutcheon Plate: Round, brass, wall type.
 - 8. Outlet: Back, with pipe threads.
 - 9. Number of Inlets: Two.
 - 10. Escutcheon Plate Marking: Similar to "AUTO SPKR".
 - 11. Finish: Polished chrome plated.
 - 12. Outlet Size: NPS 4 (DN 100).

2.6 SPRINKLERS

- A. General Requirements:
 - 1. Standard: UL's "Fire Protection Equipment Directory" listing, or "Approval Guide," published by FM Global, listing.
 - 2. Pressure Rating for Automatic Sprinklers: 175 psig minimum.
- B. Automatic Sprinklers with Heat-Responsive Element:
 - 1. Nonresidential Applications: UL 199.
 - 2. Characteristics: Nominal 1/2-inch orifice with discharge coefficient K of 5.6, and for "Ordinary" temperature classification rating unless otherwise indicated or

required by application. Light-Hazard and Ordinary Group I. Ordinary Group II: Nominal 1/2-inch orifice with discharge coefficient K of 8.0.

C. Sprinkler Finishes:

- 1. Chrome plated.
- 2. Bronze.
- 3. Painted.

D. Sprinkler Guards:

- 1. Standard: UL 199.
- 2. Type: Wire cage with fastening device for attaching to sprinkler.

PART 3 EXECUTION

3.1 PREPARATION

- A. Perform fire-hydrant flow test according to NFPA 13 and NFPA 291. Use results for system design calculations required in "Quality Assurance" Article.
- B. Report test results promptly and in writing.

3.2 PIPING INSTALLATION

- A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.
 - 1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.
- B. Piping Standard: Comply with requirements in NFPA 13 for installation of sprinkler piping.
- C. Install seismic restraints on piping. Comply with requirements in NFPA 13 for seismic-restraint device materials and installation.
- D. Use listed fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
- E. Install unions adjacent to each valve in pipes NPS 2 and smaller.
- F. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.

- G. Install "Inspector's Test Connections" in sprinkler system piping, complete with shutoff valve, and sized and located according to NFPA 13.
- H. Install sprinkler piping with drains for complete system drainage.
- I. Install hangers and supports for sprinkler system piping according to NFPA 13. Comply with requirements in NFPA 13 for hanger materials.
- J. Drain dry-pipe sprinkler piping.
- K. Pressurize and check dry-pipe sprinkler system piping and air-pressure maintenance devices, air compressors.
- L. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Division 21 Section "Sleeves and Sleeve Seals for Fire-Suppression Piping."
- M. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Division 21 Section "Sleeves and Sleeve Seals for Fire-Suppression Piping."
- N. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Division 21 Section "Escutcheons for Fire-Suppression Piping."

3.3 JOINT CONSTRUCTION

- A. Install couplings, flanges, flanged fittings, unions, nipples, and transition and special fittings that have finish and pressure ratings same as or higher than system's pressure rating for aboveground applications unless otherwise indicated.
- B. Install unions adjacent to each valve in pipes NPS 2 and smaller.
- C. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.
- D. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- E. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.
- F. Flanged Joints: Select appropriate gasket material in size, type, and thickness suitable for water service. Join flanges with gasket and bolts according to ASME B31.9.
- G. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads.

- 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.
- H. Twist-Locked Joints: Insert plain end of steel pipe into plain-end-pipe fitting. Rotate retainer lugs one-quarter turn or tighten retainer pin.
- I. Steel-Piping, Cut-Grooved Joints: Cut square-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe joints.
- J. Dissimilar-Material Piping Joints: Make joints using adapters compatible with materials of both piping systems.

3.4 SPRINKLER INSTALLATION

A. Install dry-type sprinklers with water supply from heated space. Do not install pendent or sidewall, wet-type sprinklers in areas subject to freezing.

3.5 IDENTIFICATION

- A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13.
- B. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Division 26 Section "Identification for Electrical Systems."

3.6 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Tests and Inspections:
 - 1. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - 3. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.
 - 4. Energize circuits to electrical equipment and devices.
 - 5. Start and run air compressors.
 - 6. Coordinate with fire-alarm tests. Operate as required.
 - 7. Verify that equipment hose threads are same as local fire-department equipment.

- C. Sprinkler piping system will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

3.7 CLEANING

- A. Clean dirt and debris from sprinklers.
- B. Remove and replace sprinklers with paint other than factory finish.

3.8 PIPING SCHEDULE

- A. Sprinkler specialty fittings may be used, downstream of control vales, instead of specified fittings.
- B. Standard-pressure, dry-pipe sprinkler system, NPS 2 and smaller, shall be the following:
 - 1. Standard-weight, or schedule 40 galvanized-steel pipe with threaded ends; galvanized, gray-iron threaded fittings; and threaded joints.
- C. Standard-pressure, dry-pipe sprinkler system, NPS 2-1/2 to NPS 4, shall be the following:
 - 1. Standard-weight, galvanized-steel pipe with cut-grooved ends; galvanized, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.

3.9 SPRINKLER SCHEDULE

- A. Use sprinkler types in subparagraphs below for the following applications:
 - 1. Tipping Floor, Transfer Trailer Station: Upright sprinklers.
- B. Provide sprinkler types in subparagraphs below with finishes indicated.
 - 1. Upright Sprinklers: Rough brass.

END OF SECTION

DIVISION 22 - PLUMBING

SECTION 22 05 11

COMMON WORK RESULTS FOR PLUMBING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 DESCRIPTION

- A. The requirements of this Section shall apply to all sections of Division 22.
- B. Definitions:
 - 1. Exposed: Piping and equipment exposed to view in finished rooms.
- C. Abbreviations/Acronyms:
 - 1. CWP: Cold Working Pressure
 - 2. DWV: Drainage, Waste and Vent
 - 3. FD: Floor Drain
 - 4. HOA: Hands-Off-Automatic
 - 5. HP: Horsepower
 - 6. NPS: Nominal Pipe Size
 - 7. NPT: National Pipe Thread
 - 8. OS&Y: Outside Stem and Yoke
 - 9. WOG: Water, Oil, Gas

1.3 APPLICABLE PUBLICATIONS

- A. The publications listed below shall form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society of Mechanical Engineers (ASME):

ASME Boiler and Pressure Vessel Code -

BPVC Section IX-2013......Welding, Brazing, and Fusing Qualifications

	B31.1-2012	Power Piping
C.	American Society for Testing and Materials (ASTM):	
	A36/A36M-2012	Standard Specification for Carbon Structural Steel
	A575-96(R2013)e1	Standard Specification for Steel Bars, Carbon, Merchant Quality, M-Grades
	E84-2013a	Standard Test Method for Surface Burning Characteristics of Building Materials
	E119-2012a	Standard Test Methods for Fire Tests of Building Construction and Materials
D.	D. Manufacturers Standardization Society (MSS) of the Valve and Fittings Industry	
	SP-58-2009	Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application and Installation
	SP-69-2003	Pipe Hangers and Supports - Selection and Application
E.	. National Electrical Manufacturers Association (NEMA):	
	MG 1-2011	Motors and Generators
F.	National Fire Protection Association (NFPA):	
	51B-2014	Standard for Fire Prevention During Welding, Cutting and Other Hot Work
	54-2012	National Fuel Gas Code
	70-2011	National Electrical Code (NEC)
G.	NSF International (NSF):	
	5-2012	Water Heaters, Hot Water Supply Boilers, and Heat Recovery Equipment
	14-2012	Plastic Piping System Components and Related Materials
	61-2012	Drinking Water System Components – Health Effects
	372-2011	Drinking Water System Components – Lead Content

1.4 SUBMITTALS

- A. Submittals, including number of required copies, shall be submitted in accordance with Division 01 General Requirements.
- B. Contractor shall make all necessary field measurements and investigations to assure that the equipment and assemblies will meet contract requirements and will fit the space available.
- C. If equipment is submitted which differs in arrangement from that shown, provide drawings that show the rearrangement of all associated systems. Approval will be given only if all features of the equipment and associated systems, including accessibility, are equivalent to that required by the contract.
- D. Manufacturer's Literature and Data: Manufacturer's literature shall be submitted under the pertinent section rather than under this section.
 - 1. Equipment and materials identification.
 - 2. Hangers, inserts, supports and bracing. Provide load calculations for variable spring and constant support hangers.
- E. Submittals and shop drawings for interdependent items, containing applicable descriptive information, shall be furnished together and complete in a group. Coordinate and properly integrate materials and equipment in each group to provide a completely compatible and efficient installation. Final review and approvals will be made only by groups.

1.5 QUALITY ASSURANCE

A. Products Criteria:

- 1. Standard Products: Material and equipment shall be the standard products of a manufacturer regularly engaged in the manufacture, supply and servicing of the specified products for at least 5 years.
- 2. All items furnished shall be free from defects that would adversely affect the performance, maintainability and appearance of individual components and overall assembly.
- 4. The products and execution of work specified in Division 22 shall conform to the referenced codes and standards as required by the specifications. Local codes and amendments enforced by the local code official shall be enforced, if required by local authorities such as the natural gas supplier. If the local codes are more stringent, then the local code shall apply.
- 5. Multiple Units: When two or more units of materials or equipment of the same type or class are required, these units shall be products of one manufacturer.

- 6. Assembled Units: Manufacturers of equipment assemblies, which use components made by others, assume complete responsibility for the final assembled product.
- 7. Nameplates: Nameplate bearing manufacturer's name or identifiable trademark shall be securely affixed in a conspicuous place on equipment, or name or trademark cast integrally with equipment, stamped or otherwise permanently marked on each item of equipment.
- 8. Asbestos products or equipment or materials containing asbestos shall not be used.
- B. Welding: Before any welding is performed, contractor shall submit a certificate certifying that welders comply with the following requirements:
 - 1. Qualify welding processes and operators for piping according to ASME "Boiler and Pressure Vessel Code", Section IX, "Welding and Brazing Qualifications".
 - 2. Comply with provisions of ASME B31 series "Code for Pressure Piping".
 - 3. Certify that each welder and welding operator has passed American Welding Society (AWS) qualification tests for the welding processes involved, and that certification is current.
- C. Manufacturer's Recommendations: Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the material being installed, printed copies of these recommendations shall be furnished to the COR prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.
- D. Plumbing Systems: International Plumbing Code of New York State. Unless otherwise required herein, perform plumbing work in accordance with the latest version of the International Plumbing Code of New York State.
- E. Cleanliness of Piping and Equipment Systems:
 - 1. Care shall be exercised in the storage and handling of equipment and piping material to be incorporated in the work. Debris arising from cutting, threading and welding of piping shall be removed.
 - 2. Piping systems shall be flushed, blown or pigged as necessary to deliver clean systems.
 - 3. The interior of all tanks shall be cleaned prior to delivery. All piping shall be tested in accordance with the specifications and the 2020 Plumbing Code of New York State.
 - 4. Contractor shall be fully responsible for all costs, damage, and delay arising from failure to provide clean systems.

1.6 DELIVERY, STORAGE AND HANDLING

A. Protection of Equipment:

- 1. Equipment and material placed on the job site shall remain in the custody of the Contractor. The Contractor is solely responsible for the protection of such equipment and material against any damage.
- 2. Damaged equipment shall be replaced with an identical unit. Such replacement shall be at no additional cost or additional time to the Owner.
- 3. Interiors of new equipment and piping systems shall be protected against entry of foreign matter. Both inside and outside shall be cleaned before painting or placing equipment in operation.
- 4. Existing equipment and piping being worked on by the Contractor shall be under the custody and responsibility of the Contractor and shall be protected as required for new work.

1.7 AS-BUILT DOCUMENTATION

A. The installing contractor shall maintain as-built drawings of each completed phase for verification; and, shall provide the complete set at the end of the project. As-built drawings are to be provided, and a copy of them on Auto-Cad provided on compact disk or DVD.

PART 2 PRODUCTS

2.1 REFER TO SCHEDULES AND EQUIPMENT NOTES ON DRAWINGS FOR BASIS OF DESIGN MATERIALS, MANUFACTURERS AND MODEL NUMBERS.

2.2 MATERIALS FOR VARIOUS SERVICES

- A. Solder or flux containing lead shall not be used with copper pipe.
- B. Material or equipment containing a weighted average of greater than 0.25 percent lead shall not be used in any potable water system intended for human consumption, and shall be certified in accordance with NSF 61.
- C. In-line devices such as water meters, building valves, check valves, stops, valves, fittings, tanks and backflow preventers shall comply with NSF 61 and NSF 372.

2.3 FACTORY-ASSEMBLED PRODUCTS

- A. Standardization of components shall be maximized to reduce spare part requirements.
- B. Manufacturers of equipment assemblies that include components made by others shall assume complete responsibility for final assembled unit.
 - 1. All components of an assembled unit need not be products of same manufacturer.

- 2. Constituent parts that are alike shall be products of a single manufacturer.
- 3. Components shall be compatible with each other and with the total assembly for intended service.
- 4. Contractor shall guarantee performance of assemblies of components, and shall repair or replace elements of the assemblies as required to deliver specified performance of the complete assembly at no additional cost or time to the Owner.
- C. Components of equipment shall bear manufacturer's name and trademark, model number, serial number and performance data on a name plate securely affixed in a conspicuous place, or cast integral with, stamped or otherwise permanently marked upon the components of the equipment.

2.4 COMPATIBILITY OF RELATED EQUIPMENT

A. Equipment and materials installed shall be compatible in all respects with other items being furnished and with existing items so that the result will be a complete and fully operational system that conforms to contract requirements.

2.5 EQUIPMENT AND MATERIALS IDENTIFICATION

- A. Use symbols, nomenclature and equipment numbers specified, shown on the drawings, or shown in the maintenance manuals. Coordinate equipment and valve identification with facility maintenance staff.
- B. Valve Tags and Lists:
 - 1. Plumbing: All valves shall be provided with valve tags and listed on a valve list.

2.5 PIPE PENETRATIONS

- A. Pipe penetration sleeves shall be installed for all pipe other than rectangular blocked out floor openings for risers in mechanical bays.
- B. Pipe penetration sleeve materials shall comply with all firestopping requirements for each penetration.
- C. Penetrations are not allowed through beams or ribs, but may be installed in concrete beam flanges, with structural engineer prior approval.

2.6 ASBESTOS

A. Materials containing asbestos are not permitted.

PART 3 EXECUTION

3.1 ARRANGEMENT AND INSTALLATION OF EQUIPMENT AND PIPING

- A. Location of piping, sleeves, inserts, hangers, and equipment, access provisions shall be coordinated with the work of all trades. Piping, sleeves, inserts, hangers, and equipment shall be located clear of windows, doors, openings, light outlets, and other services and utilities. Equipment layout drawings shall be prepared to coordinate proper location and personnel access of all facilities. The drawings shall be submitted for review.
- B. Manufacturer's published recommendations shall be followed for installation methods not otherwise specified.
- C. Operating Personnel Access and Observation Provisions: All equipment and systems shall be arranged to provide clear view and easy access, without use of portable ladders, for maintenance, testing and operation of all devices including, but not limited to: all equipment items, valves, backflow preventers, filters, strainers, transmitters, sensors, meters and control devices. All gages and indicators shall be clearly visible by personnel standing on the floor or on permanent platforms. Maintenance and operating space and access provisions that are shown on the drawings shall not be changed nor reduced.
- D. Structural systems necessary for pipe and equipment support shall be coordinated to permit proper installation.
- E. Location of pipe sleeves, trenches and chases shall be accurately coordinated with equipment and piping locations.

F. Cutting Holes:

1. Holes through structural steel or concrete shall be by the General Contractor, locations and sizes shall be coordinated by this contractor.

G. Protection and Cleaning:

- 1. Equipment and materials shall be carefully handled, properly stored, and adequately protected to prevent damage before and during installation, in accordance with the manufacturer's recommendations. Damaged or defective items in the opinion of the Owner's Representative, shall be replaced at no additional cost or time to the Owner.
- 2. Protect all finished parts of equipment, such as shafts and bearings where accessible, from rust prior to operation by means of protective grease coating and wrapping. Close pipe openings with caps or plugs during installation. Pipe openings, equipment, and plumbing fixtures shall be tightly covered against dirt or mechanical injury. At completion of all work thoroughly clean fixtures, exposed materials and equipment.

3.2 TEMPORARY PIPING AND EQUIPMENT

- A. Continuity of operation of existing facilities may require temporary installation or relocation of equipment and piping. Temporary equipment or pipe installation or relocation shall be provided to maintain continuity of operation of existing facilities.
- B. Temporary facilities and piping shall be completely removed back to the nearest active distribution branch or main pipe line and any openings in structures sealed. Dead legs are not allowed in potable water systems. Necessary blind flanges and caps shall be provided to seal open piping remaining in service.

3.3 PIPE AND EQUIPMENT SUPPORTS

- A. Where hanger spacing does not correspond with joist or rib spacing, use structural steel channels secured directly to joist and rib structure that will correspond to the required hanger spacing, and then suspend the equipment and piping from the channels. Holes shall be drilled or burned in structural steel ONLY with the prior written approval of the structural engineer.
- B. The use of chain pipe supports, wire or strap hangers; wood for blocking, stays and bracing, or hangers suspended from piping above shall not be permitted. Rusty products shall be replaced.
- C. Hanger rods shall be used that are straight and vertical. Turnbuckles for vertical adjustments may be omitted where limited space prevents use. A minimum of 1/2 inch clearance between pipe or piping covering and adjacent work shall be provided.

D. Overhead Supports:

- 1. The basic structural system of the building is designed to sustain the loads imposed by equipment and piping to be supported overhead.
- 2. Provide steel structural members, in addition to those shown, of adequate capability to support the imposed loads, located in accordance with the final approved layout of equipment and piping.

E. Floor Supports:

- 1. Provide structural steel systems for support of equipment and piping. Structural systems shall be anchored and doweled to resist forces under operating and seismic conditions (if applicable) without excessive displacement or structural failure.
- 2. Bases and supports shall not be located and installed until equipment mounted thereon has been approved.
- 3. All equipment shall be shimmed, leveled, firmly anchored, and grouted with epoxy grout. Anchor bolts shall be placed in sleeves, anchored to the bases. Fill the annular

space between sleeves and bolts with a grout material to permit alignment and realignment.

3.4 PLUMBING SYSTEMS DEMOLITION

- A. Unless specified otherwise, all piping, wiring, conduit, and other devices associated with the equipment not re-used in the new work shall be completely removed. This includes all concrete equipment pads, pipe, valves, fittings, insulation, and all hangers including the top connection and any fastenings to building structural systems. All openings shall be sealed after removal of equipment, pipes, ducts, and other penetrations in roof, walls, floors, in an approved manner and in accordance with plans and specifications where specifically covered. Structural integrity of the building system shall be maintained. Reference shall also be made to the drawings and specifications of the other disciplines in the project for additional facilities to be demolished or handled.
- B. The Contractor shall remove all material and equipment, devices and demolition debris under these plans and specifications. Such material shall be removed from property expeditiously and shall not be allowed to accumulate.

3.5 CLEANING AND PAINTING

- A. Prior to final inspection and acceptance of the facilities for beneficial use by the Owner, the facilities, equipment and systems shall be thoroughly cleaned.
- B. In addition, the following special conditions apply:
 - 1. Cleaning shall be thorough. Solvents, cleaning materials and methods recommended by the manufacturers shall be used for the specific tasks. All rust shall be removed prior to painting and from surfaces to remain unpainted. Scratches, scuffs, and abrasions shall be repaired prior to applying prime and finish coats.
 - 2. Control and instrument panels shall be cleaned and damaged surfaces repaired. Touchup painting shall be made with matching paint type and color obtained from manufacturer or computer matched.
 - 3. Pumps, motors, steel and cast iron bases, and coupling guards shall be cleaned, and shall be touched-up with the same paint type and color as utilized by the pump manufacturer.
 - 4. The final result shall be a smooth, even-colored, even-textured factory finish on all items. The entire piece of equipment shall be repainted, if necessary, to achieve this. Lead based paints shall not be used.

END OF SECTION

SECTION 22 05 17

SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Sleeves.
 - 2. Sleeve seal systems.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 PRODUCTS

2.1 SLEEVES

- A. Galvanized Steel Wall Pipes: ASTM A 53/A 53M, Schedule 40, with plain ends and welded steel collar; zinc coated.
- B. Galvanized Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, with plain ends.

2.2 SLEEVE SEAL SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:
 - 1. Advance Products & Systems, Inc.
 - 2. CALPICO, Inc.
 - 3. Metraflex Company (The).
 - 4. Pipeline Seal and Insulator, Inc.
 - 5. Proco Products, Inc.

- B. Description: Modular sealing-element unit, designed for field assembly, for filling annular space between piping and sleeve.
 - 1. Sealing Elements: EPDM-rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
 - 2. Pressure Plates: Stainless steel.
 - 3. Connecting Bolts and Nuts: Carbon steel, with corrosion-resistant coating, of length required to secure pressure plates to sealing elements.

PART 3 EXECUTION

3.1 SLEEVE INSTALLATION

- A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls.
- B. For sleeves that will have sleeve seal system installed, select sleeves of size large enough to provide 1 inch annular clear space between piping and concrete slabs and walls.

3.2 SLEEVE SEAL SYSTEM INSTALLATION

- A. Install sleeve seal systems in sleeves in exterior concrete walls and slabs-on-grade at service piping entries into building.
- B. Select type, size, and number of sealing elements required for piping material and size and for sleeve ID or hole size. Position piping in center of sleeve. Center piping in penetration, assemble sleeve seal system components, and install in annular space between piping and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make a watertight seal.

3.3 SLEEVE AND SLEEVE SEAL SCHEDULE

- A. Use sleeves and sleeve seals for the following piping-penetration applications:
 - 1. Exterior Concrete Walls above Grade:
 - a. Piping Smaller Than NPS 6: Cast iron wall sleeves.
 - 2. Exterior Concrete Walls below Grade:
 - a. Piping Smaller Than NPS 6: Cast iron wall sleeves with sleeve seal system.
 - 1) Select sleeve size to allow for 1 inch annular clear space between piping and sleeve for installing sleeve seal system.
 - 3. Concrete Slabs above Grade:

- a. Piping Smaller Than NPS 6: Galvanized steel pipe sleeves or Stack sleeve fittings.
- b. Piping NPS 6 and Larger: Galvanized steel pipe sleeves or Stack sleeve fittings.

4. Interior Partitions:

- a. Piping Smaller Than NPS 6: Galvanized steel pipe sleeves.
- b. Piping NPS 6 and Larger: Galvanized steel sheet sleeves.

END OF SECTION

SECTION 22 05 29

HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Metal pipe hangers and supports.
 - 2. Trapeze pipe hangers.
 - 3. Fastener systems.
 - 4. Pipe stands.

B. Related Sections:

1. Division 05 Section "Metal Fabrications" for structural-steel shapes and plates for trapeze hangers for pipe and equipment supports.

1.3 **DEFINITIONS**

A. MSS: Manufacturers Standardization Society of the Valve and Fittings Industry Inc.

1.4 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design trapeze pipe hangers and equipment supports, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Hangers and supports for plumbing piping and equipment shall withstand the effects of gravity loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
 - 1. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

- B. Shop Drawings: Show fabrication and installation details and include calculations for the following; include Product Data for components:
 - 1. Trapeze pipe hangers.
 - 2. Pipe stands.
 - 3. Equipment supports.
- C. Delegated-Design Submittal: For trapeze hangers indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 1. Detail fabrication and assembly of trapeze hangers.
 - 2. Design Calculations: Calculate requirements for designing trapeze hangers.
- D. Welding certificates.

1.6 QUALITY ASSURANCE

- A. Structural Steel Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code Steel."
- B. Pipe Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code.

PART 2 PRODUCTS

2.1 METAL PIPE HANGERS AND SUPPORTS

- A. Carbon-Steel Pipe Hangers and Supports:
 - 1. Description: MSS SP-58, Types 1 through 58, factory-fabricated components.
 - 2. Galvanized Metallic Coatings: Pre-galvanized or hot dipped.
 - 3. Nonmetallic Coatings: Plastic coating, jacket, or liner.
 - 4. Padded Hangers: Hanger with fiberglass or other pipe insulation pad or cushion to support bearing surface of piping.
 - 5. Hanger Rods: Continuous-thread rod, nuts, and washer made of carbon steel.
- B. Copper Pipe Hangers:
 - 1. Description: MSS SP-58, Types 1 through 58, copper-coated-steel, factory-fabricated components.

2.2 FASTENER SYSTEMS

- A. Powder-Actuated Fasteners: Threaded-steel stud, for use in hardened portland cement concrete with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.
- B. Mechanical-Expansion Anchors: Insert-wedge-type, zinc-coated steel anchors, for use in hardened portland cement concrete; with pull-out, tension, and shear capacities appropriate for supported loads and building materials where used.

2.3 PIPE STANDS

A. General Requirements for Pipe Stands: Shop or field-fabricated assemblies made of manufactured corrosion-resistant components to support roof-mounted piping.

2.4 MISCELLANEOUS MATERIALS

A. Structural Steel: ASTM A 36/A 36M, carbon-steel plates, shapes, and bars; black and galvanized.

PART 3 EXECUTION

3.1 HANGER AND SUPPORT INSTALLATION

- A. Metal Pipe-Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Install hangers, supports, clamps, and attachments as required to properly support piping from the building structure.
- B. Metal Trapeze Pipe-Hanger Installation: Comply with MSS SP-69 and MSS SP-89. Arrange for grouping of parallel runs of horizontal piping, and support together on field-fabricated trapeze pipe hangers.
 - 1. Pipes of Various Sizes: Support together and space trapezes for smallest pipe size or install intermediate supports for smaller diameter pipes as specified for individual pipe hangers.
 - 2. Field fabricate from ASTM A 36/A 36M, carbon-steel shapes selected for loads being supported. Weld steel according to AWS D1.1/D1.1M.
- C. Thermal-Hanger Shield Installation: Install in pipe hanger or shield for insulated piping.
- D. Fastener System Installation:
 - 1. Install powder-actuated fasteners for use in lightweight concrete or concrete slabs less than 4 inches thick in concrete after concrete is placed and completely cured. Use operators that are licensed by powder-actuated tool manufacturer. Install fasteners according to powder-actuated tool manufacturer's operating manual.

2. Install mechanical-expansion anchors in concrete after concrete is placed and completely cured. Install fasteners according to manufacturer's written instructions.

E. Pipe Stand Installation:

- 1. Pipe Stand Types except Curb-Mounted Type: Assemble components and mount on smooth roof surface. Do not penetrate roof membrane.
- F. Install hangers and supports complete with necessary attachments, inserts, bolts, rods, nuts, washers, and other accessories.
- G. Equipment Support Installation: Fabricate from welded-structural-steel shapes.
- H. Install hangers and supports to allow controlled thermal and seismic movement of piping systems, to permit freedom of movement between pipe anchors, and to facilitate action of expansion joints, expansion loops, expansion bends, and similar units.
- I. Install lateral bracing with pipe hangers and supports to prevent swaying.
- J. Install building attachments within concrete slabs or attach to structural steel. Install additional attachments at concentrated loads, including valves, flanges, and strainers, NPS 2-1/2 and larger and at changes in direction of piping. Install concrete inserts before concrete is placed; fasten inserts to forms and install reinforcing bars through openings at top of inserts.
- K. Load Distribution: Install hangers and supports so that piping live and dead loads and stresses from movement will not be transmitted to connected equipment.
- L. Pipe Slopes: Install hangers and supports to provide indicated pipe slopes and to not exceed maximum pipe deflections allowed by ASME B31.9 for building services piping.

M. Insulated Piping:

- 1. Attach clamps and spacers to piping.
 - a. Piping Operating above Ambient Air Temperature: Clamp may project through insulation.
 - b. Piping Operating below Ambient Air Temperature: Use thermal-hanger shield insert with clamp sized to match OD of insert.
 - c. Do not exceed pipe stress limits allowed by ASME B31.9 for building services piping.
- 2. Install MSS SP-58, Type 39, protection saddles if insulation without vapor barrier is indicated. Fill interior voids with insulation that matches adjoining insulation.

- 3. Install MSS SP-58, Type 40, protective shields on cold piping with vapor barrier. Shields shall span an arc of 180 degrees.
- 4. Shield Dimensions for Pipe: Not less than the following:
 - a. NPS 1/4 to NPS 3-1/2: 12 inches long and 0.048 inch thick.
- 5. Thermal-Hanger Shields: Install with insulation same thickness as piping insulation.

3.2 METAL FABRICATIONS

- A. Cut, drill, and fit miscellaneous metal fabrications for trapeze pipe hangers and equipment supports.
- B. Fit exposed connections together to form hairline joints. Field weld connections that cannot be shop welded because of shipping size limitations.
- C. Field Welding: Comply with AWS D1.1/D1.1M procedures for shielded, metal arc welding; appearance and quality of welds; and methods used in correcting welding work; and with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. Finish welds at exposed connections so no roughness shows after finishing and so contours of welded surfaces match adjacent contours.

3.3 ADJUSTING

- A. Hanger Adjustments: Adjust hangers to distribute loads equally on attachments and to achieve indicated slope of pipe.
- B. Trim excess length of continuous-thread hanger and support rods to 1-1/2 inches.

3.4 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - 1. Apply paint by brush or spray to provide a minimum dry film thickness of 2.0 mils.

- B. Touchup: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal are specified in Division 09 painting Sections.
- C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

3.5 HANGER AND SUPPORT SCHEDULE

- A. Specific hanger and support requirements are in Sections specifying piping systems and equipment.
- B. Comply with MSS SP-69 for pipe-hanger selections and applications that are not specified in piping system Sections.
- C. Use hangers and supports with galvanized metallic coatings for piping and equipment that will not have field-applied finish.
- D. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
- E. Use carbon-steel pipe hangers and supports and metal trapeze pipe hangers and attachments for general service applications.
- F. Use copper-plated pipe hangers for uninsulated copper piping and tubing.
- G. Use padded hangers for piping that is subject to scratching.
- H. Use thermal-hanger shield inserts for insulated piping and tubing.
- I. Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Adjustable, Steel Clevis Hangers (MSS Type 1): For suspension of noninsulated or insulated, stationary pipes NPS 1/2 to NPS 30.
 - 2. Carbon or Alloy Steel, Double-Bolt Pipe Clamps (MSS Type 3): For suspension of pipes NPS 3/4 to NPS 36, requiring clamp flexibility and up to 4 inches of insulation.
 - 3. Steel Pipe Clamps (MSS Type 4): For suspension of cold and hot pipes NPS 1/2 to NPS 24 if little or no insulation is required.
 - 4. Pipe Hangers (MSS Type 5): For suspension of pipes NPS 1/2 to NPS 4, to allow off-center closure for hanger installation before pipe erection.
 - 5. Adjustable, Swivel Split or Solid-Ring Hangers (MSS Type 6): For suspension of noninsulated, stationary pipes NPS 3/4 to NPS 8.

- 6. Adjustable, Steel Band Hangers (MSS Type 7): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8.
- 7. Adjustable Band Hangers (MSS Type 9): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8.
- 8. Adjustable, Swivel-Ring Band Hangers (MSS Type 10): For suspension of noninsulated, stationary pipes NPS 1/2 to NPS 8.
- 9. Split Pipe Ring with or without Turnbuckle Hangers (MSS Type 11): For suspension of noninsulated, stationary pipes NPS 3/8 to NPS 8.
- 10. Extension Hinged or Two-Bolt Split Pipe Clamps (MSS Type 12): For suspension of noninsulated, stationary pipes NPS 3/8 to NPS 3.
- 11. U-Bolts (MSS Type 24): For support of heavy pipes NPS 1/2 to NPS 30.
- 12. Clips (MSS Type 26): For support of insulated pipes not subject to expansion or contraction.
- 13. Single-Pipe Rolls (MSS Type 41): For suspension of pipes NPS 1 to NPS 30, from two rods if longitudinal movement caused by expansion and contraction might occur.
- 14. Adjustable Roller Hangers (MSS Type 43): For suspension of pipes NPS 2-1/2 to NPS 24, from single rod if horizontal movement caused by expansion and contraction might occur.
- 15. Complete Pipe Rolls (MSS Type 44): For support of pipes NPS 2 to NPS 42 if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is not necessary.
- 16. Pipe Roll and Plate Units (MSS Type 45): For support of pipes NPS 2 to NPS 24 if small horizontal movement caused by expansion and contraction might occur and vertical adjustment is not necessary.
- 17. Adjustable Pipe Roll and Base Units (MSS Type 46): For support of pipes NPS 2 to NPS 30 if vertical and lateral adjustment during installation might be required in addition to expansion and contraction.
- J. Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Extension Pipe or Riser Clamps (MSS Type 8): For support of pipe risers NPS 3/4 to NPS 24.

- 2. Carbon or Alloy Steel Riser Clamps (MSS Type 42): For support of pipe risers NPS 3/4 to NPS 24 if longer ends are required for riser clamps.
- K. Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Steel Turnbuckles (MSS Type 13): For adjustment up to 6 inches for heavy loads.
 - 2. Steel Clevises (MSS Type 14): For 120 to 450 deg F piping installations.
 - 3. Swivel Turnbuckles (MSS Type 15): For use with MSS Type 11, split pipe rings.
 - 4. Malleable-Iron Sockets (MSS Type 16): For attaching hanger rods to various types of building attachments.
 - 5. Steel Weldless Eye Nuts (MSS Type 17): For 120 to 450 deg F piping installations.
- L. Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Steel or Malleable Concrete Inserts (MSS Type 18): For upper attachment to suspend pipe hangers from concrete ceiling.
 - 2. Top Beam C-Clamps (MSS Type 19): For use under roof installations with barjoist construction, to attach to top flange of structural shape.
 - 3. Side Beam or Channel Clamps (MSS Type 20): For attaching to bottom flange of beams, channels, or angles.
 - 4. Center Beam Clamps (MSS Type 21): For attaching to center of bottom flange of beams.
 - 5. Welded Beam Attachments (MSS Type 22): For attaching to bottom of beams if loads are considerable and rod sizes are large.
 - 6. C-Clamps (MSS Type 23): For structural shapes.
 - 7. Top Beam Clamps (MSS Type 25): For top of beams if hanger rod is required tangent to flange edge.
 - 8. Side Beam Clamps (MSS Type 27): For bottom of steel I-beams.
 - 9. Steel Beam Clamps with Eye Nuts (MSS Type 28): For attaching to bottom of steel I-beams for heavy loads.
 - 10. Linked Steel Clamps with Eye Nuts (MSS Type 29): For attaching to bottom of steel I-beams for heavy loads, with link extensions.

- 11. Malleable Beam Clamps with Extension Pieces (MSS Type 30): For attaching to structural steel.
- 12. Welded Steel Brackets: For support of pipes from below or for suspending from above by using clip and rod. Use one of the following for indicated loads:
 - a. Light (MSS Type 31): 750 lb.
 - b. Medium (MSS Type 32): 1500 lb.
 - c. Heavy (MSS Type 33): 3000 lb.
- 13. Side Beam Brackets (MSS Type 34): For sides of steel or wooden beams.
- 14. Plate Lugs (MSS Type 57): For attaching to steel beams if flexibility at beam is required.
- 15. Horizontal Travelers (MSS Type 58): For supporting piping systems subject to linear horizontal movement where headroom is limited.
- M. Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Steel-Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
 - 2. Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation.
 - 3. Thermal-Hanger Shield Inserts: For supporting insulated pipe.
- N. Spring Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
 - 1. Restraint-Control Devices (MSS Type 47): Where indicated to control piping movement.
 - 2. Spring Cushions (MSS Type 48): For light loads if vertical movement does not exceed 1-1/4 inches.
 - 3. Spring-Cushion Roll Hangers (MSS Type 49): For equipping Type 41, roll hanger with springs.
 - 4. Spring Sway Braces (MSS Type 50): To retard sway, shock, vibration, or thermal expansion in piping systems.

- 5. Variable-Spring Hangers (MSS Type 51): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from hanger.
- 6. Variable-Spring Base Supports (MSS Type 52): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from base support.
- 7. Variable-Spring Trapeze Hangers (MSS Type 53): Preset to indicated load and limit variability factor to 25 percent to allow expansion and contraction of piping system from trapeze support.
- 8. Constant Supports: For critical piping stress and if necessary to avoid transfer of stress from one support to another support, critical terminal, or connected equipment. Include auxiliary stops for erection, hydrostatic test, and load-adjustment capability. These supports include the following types:
 - a. Horizontal (MSS Type 54): Mounted horizontally.
 - b. Vertical (MSS Type 55): Mounted vertically.
 - c. Trapeze (MSS Type 56): Two vertical-type supports and one trapeze member.
- O. Comply with MSS SP-69 for trapeze pipe-hanger selections and applications that are not specified in piping system Sections.
- P. Comply with MFMA-103 for metal framing system selections and applications that are not specified in piping system Sections.
- Q. Use powder-actuated fasteners or mechanical-expansion anchors instead of building attachments where required in concrete construction.
- R. Use pipe positioning systems in pipe spaces behind plumbing fixtures to support supply and waste piping for plumbing fixtures.

END OF SECTION

SECTION 22 07 00

PLUMBING INSULATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Insulation Materials:
 - a. Mineral fiber.
 - 2. Insulating cements.
 - 3. Adhesives.
 - 4. Mastics.
 - 5. Lagging adhesives.
 - 6. Sealants.
 - 7. Factory-applied jackets.
 - 8. Field-applied jackets.
 - 9. Tapes.
 - 10. Securements.
 - 11. Corner angles.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include thermal conductivity, thickness, and jackets (both factory and field applied, if any).
- B. Qualification Data: For qualified Installer.
- C. Material Test Reports: From a qualified testing agency acceptable to authorities having jurisdiction indicating, interpreting, and certifying test results for compliance of insulation materials, sealers, attachments, cements, and jackets, with requirements indicated. Include dates of tests and test methods employed.

D. Field quality control reports.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Skilled mechanics who have successfully completed an apprenticeship program or another craft training program certified by the Department of Labor, Bureau of Apprenticeship and Training.
- B. Fire-Test-Response Characteristics: Insulation and related materials shall have fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, tapes, and cement material containers, with appropriate markings of applicable testing and inspecting agency.
 - 1. Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
 - 2. Insulation Installed Outdoors: Flame-spread index of 75 or less, and smoke-developed index of 150 or less.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Insulation material containers shall be marked by manufacturer with appropriate ASTM standard designation, type and grade, and maximum use temperature.

1.6 COORDINATION

- A. Coordinate size and location of supports, hangers, and insulation shields specified in Division 22 Section "Hangers and Supports for Plumbing Piping and Equipment."
- B. Coordinate clearance requirements with piping Installer for piping insulation application and equipment Installer for equipment insulation application. Before preparing piping Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

1.7 SCHEDULING

- A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.
- B. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 PRODUCTS

2.1 INSULATION MATERIALS

- A. Comply with requirements in Part 3 schedule articles for where insulating materials shall be applied.
- B. Products shall not contain asbestos, lead, mercury, or mercury compounds.
- C. Products that come in contact with stainless steel shall have a leachable chloride content of less than 50 ppm when tested according to ASTM C 871.
- D. Mineral Fiber, Preformed Pipe Insulation:
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Fibrex Insulations Inc.; Coreplus 1200.
 - b. Johns Manville; Micro-Lok.
 - c. Knauf Insulation; 1000 Pipe Insulation.
 - d. Manson Insulation Inc.; Alley-K.
 - e. Owens Corning; Fiberglas Pipe Insulation.
 - 2. Type I, 850 deg F Materials: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 547, Type I, Grade A, with factory-applied ASJ-SSL. Factory-applied jacket requirements are specified in "Factory-Applied Jackets" Article.

2.2 ADHESIVE

- A. Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise indicated.
- B. Mineral Fiber Adhesive: Comply with MIL-A-3316C, Class 2, Grade A.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Childers Products, Division of ITW; CP-82.
 - b. Foster Products Corporation, H. B. Fuller Company; 85-20.
 - c. ITW TACC, Division of Illinois Tool Works; S-90/80.
 - d. Marathon Industries, Inc.; 225.

- e. Mon-Eco Industries, Inc.; 22-25.
- 2. For indoor applications, use adhesive that has a VOC content of 80 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.3 MASTICS

- A. Materials shall be compatible with insulation materials, jackets, and substrates; comply with MIL-C-19565C, Type II.
 - 1. For indoor applications, use mastics that have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- B. Vapor-Barrier Mastic: Water based; suitable for indoor and outdoor use on below ambient services.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Childers Products, Division of ITW; CP-35.
 - b. Foster Products Corporation, H. B. Fuller Company; 30-90.
 - c. ITW TACC, Division of Illinois Tool Works; CB-50.
 - d. Marathon Industries, Inc.; 590.
 - e. Mon-Eco Industries, Inc.; 55-40.
 - f. Vimasco Corporation; 749.
 - 2. Water-Vapor Permeance: ASTM E 96, Procedure B, 0.013 perm at 43-mil dry film thickness.
 - 3. Service Temperature Range: Minus 20 to plus 180 deg F.
 - 4. Solids Content: ASTM D 1644, 59 percent by volume and 71 percent by weight.
 - 5. Color: White.
- C. Breather Mastic: Water based; suitable for indoor and outdoor use on above ambient services.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Childers Products, Division of ITW; CP-10.
 - b. Foster Products Corporation, H. B. Fuller Company; 35-00.

- c. ITW TACC, Division of Illinois Tool Works; CB-05/15.
- d. Marathon Industries, Inc.; 550.
- e. Mon-Eco Industries, Inc.; 55-50.
- f. Vimasco Corporation; WC-1/WC-5.
- 2. Water-Vapor Permeance: ASTM F 1249, 3 perms at 0.0625 inch dry film thickness.
- 3. Service Temperature Range: Minus 20 to plus 200 deg F.
- 4. Solids Content: 63 percent by volume and 73 percent by weight.
- 5. Color: White.

2.4 FACTORY-APPLIED JACKETS

- A. Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:
 - 1. ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C 1136, Type I.
 - 2. ASJ-SSL: ASJ with self-sealing, pressure-sensitive, acrylic-based adhesive covered by a removable protective strip; complying with ASTM C 1136, Type I.

2.5 TAPES

- A. ASJ Tape: White vapor-retarder tape matching factory-applied jacket with acrylic adhesive, complying with ASTM C 1136.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Avery Dennison Corporation, Specialty Tapes Division; Fasson 0835.
 - b. Compac Corp.; 104 and 105.
 - c. Ideal Tape Co., Inc., an American Biltrite Company; 428 AWF ASJ.
 - d. Venture Tape; 1540 CW Plus, 1542 CW Plus, and 1542 CW Plus/SQ.
 - 2. Width: 3 inches.
 - 3. Thickness: 11.5 mils.
 - 4. Adhesion: 90 ounces force/inch in width.

- 5. Elongation: 2 percent.
- 6. Tensile Strength: 40 lbf/inch in width.
- 7. ASJ Tape Disks and Squares: Precut disks or squares of ASJ tape.

2.6 SECUREMENTS

A. Bands:

- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Childers Products; Bands.
 - b. PABCO Metals Corporation; Bands.
 - c. RPR Products, Inc.; Bands.
- 2. Stainless Steel: ASTM A 167 or ASTM A 240/A 240M, Type 304 or Type 316; 0.015 inch thick, 1/2 inch wide with wing or closed seal.
- 3. Aluminum: ASTM B 209, Alloy 3003, 3005, 3105, or 5005; Temper H-14, 0.020 inch thick, 1/2 inch wide with wing or closed seal.
- 4. Springs: Twin spring set constructed of stainless steel with ends flat and slotted to accept metal bands. Spring size determined by manufacturer for application.

2.7 CORNER ANGLES

A. PVC Corner Angles: 30 mils thick, minimum 1 by 1 inch, PVC according to ASTM D 1784, Class 16354-C. White or color-coded to match adjacent surface.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions for compliance with requirements for installation and other conditions affecting performance of insulation application.
 - 1. Verify that systems and equipment to be insulated have been tested and are free of defects.
 - 2. Verify that surfaces to be insulated are clean and dry.
 - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
- B. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless steel surfaces, use demineralized water.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment and piping including fittings, valves, and specialties.
- B. Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses required for each item of equipment and pipe system as specified in insulation system schedules.
- C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.
- D. Install insulation with longitudinal seams at top and bottom of horizontal runs.
- E. Install multiple layers of insulation with longitudinal and end seams staggered.
- F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
- G. Keep insulation materials dry during application and finishing.
- H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.
- I. Install insulation with least number of joints practical.
- J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.
 - 1. Install insulation continuously through hangers and around anchor attachments.
 - 2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic.
 - 3. Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.

- 4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.
- K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.
- L. Install insulation with factory-applied jackets as follows:
 - 1. Draw jacket tight and smooth.
 - 2. Cover circumferential joints with 3-inch wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 4 inches o.c.
 - 3. Overlap jacket longitudinal seams at least 1-1/2 inches. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 4 inches o.c.
 - a. For below ambient services, apply vapor-barrier mastic over staples.
 - 4. Cover joints and seams with tape as recommended by insulation material manufacturer to maintain vapor seal.
 - 5. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.
- M. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.
- N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
- O. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.

3.4 PENETRATIONS

- A. Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.
- B. Insulation Installation at Floor Penetrations:
 - 1. Pipe: Install insulation continuously through floor penetrations.
 - 2. Seal penetrations through fire-rated assemblies. Comply with appropriate section requirements in Division 07 Thermal and Moisture Protection.

3.5 GENERAL PIPE INSULATION INSTALLATION

- A. Requirements in this article generally apply to all insulation materials except where more specific requirements are specified in various pipe insulation material installation articles.
- B. Insulation Installation on Fittings, Valves, Strainers, Flanges, and Unions:
 - 1. Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous thermal and vapor-retarder integrity, unless otherwise indicated.
 - 2. Insulate pipe elbows using preformed fitting insulation or mitered fittings made from same material and density as adjacent pipe insulation. Each piece shall be butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
 - 3. Insulate tee fittings with preformed fitting insulation or sectional pipe insulation of same material and thickness as used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire. Bond pieces with adhesive.
 - 4. Insulate valves using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement.
 - 5. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below ambient services and a breather mastic for above ambient services. Reinforce the mastic with fabric-reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.

3.6 MINERAL FIBER INSULATION INSTALLATION

- A. Insulation Installation on Straight Pipes and Tubes:
 - 1. Secure each layer of preformed pipe insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
 - 2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
 - 3. For insulation with factory-applied jackets on above ambient surfaces, secure laps with outward clinched staples at 6 inches o.c.

- 4. For insulation with factory-applied jackets on below ambient surfaces, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.
- B. Insulation Installation on Pipe Fittings and Elbows:
 - 1. Install preformed sections of same material as straight segments of pipe insulation when available.
 - 2. When preformed insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.
- C. Insulation Installation on Valves and Pipe Specialties:
 - 1. Install preformed sections of same material as straight segments of pipe insulation when available.
 - 2. When preformed sections are not available, install mitered sections of pipe insulation to valve body.
 - 3. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
 - 4. Install insulation to flanges as specified for flange insulation application.

3.7 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. All insulation applications will be considered defective Work if sample inspection reveals noncompliance with requirements.

3.8 INDOOR PIPING INSULATION SCHEDULE

- A. Domestic and Non-Potable Cold Water:
 - 1. Below $1\frac{1}{2}$ ": Insulation shall be the following:
 - a. Mineral Fiber, Preformed Pipe Insulation, Type I: 1/2 inch thick.
 - 2. $1\frac{1}{2}$ "and Larger: Insulation shall be the following:
 - a. Mineral Fiber, Preformed Pipe Insulation, Type I: 1/2 inch thick.

END OF SECTION

SECTION 22 11 16

NON-POTABLE WATER PIPING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Under-building slab and aboveground non-potable water pipes, tubes, fittings, and specialties inside the building.
- 2. Specialty valves.
- 3. Flexible connectors.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Field quality-control reports.

1.4 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- B. Comply with NSF 61 for non-potable water piping and components.

PART 2 PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements listed on drawings for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.2 COPPER TUBE AND FITTINGS

- A. Hard Copper Tube: ASTM B 88, Type L water tube, drawn temper.
 - 1. Cast-Copper Solder-Joint Fittings: ASME B16.18, pressure fittings.

- 2. Wrought-Copper Solder-Joint Fittings: ASME B16.22, wrought-copper pressure fittings.
- 3. Copper Unions: MSS SP-123, cast-copper-alloy, hexagonal-stock body, with ball-and-socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.

2.3 PIPING JOINING MATERIALS

- A. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.
- B. Brazing Filler Metals: AWS A5.8/A5.8M, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.

2.4 TRANSITION FITTINGS

- A. General Requirements:
 - 1. Same size as pipes to be joined.
 - 2. Pressure rating at least equal to pipes to be joined.
 - 3. End connections compatible with pipes to be joined.
- B. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.
- C. Sleeve-Type Transition Coupling: AWWA C219.

2.5 FLEXIBLE CONNECTORS

- A. Bronze-Hose Flexible Connectors: Corrugated-bronze tubing with bronze wire-braid covering and ends brazed to inner tubing.
 - 1. Working-Pressure Rating: Minimum 200 psig.
 - 2. End Connections NPS 2 and Smaller: Threaded copper pipe or plain-end copper tube.
 - 3. End Connections NPS 2-1/2 and Larger: Flanged copper alloy.

PART 3 EXECUTION

3.1 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of non-potable water piping. Indicated locations and arrangements are used to size pipe

- and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.
- B. Install copper tubing under building slab according to CDA's "Copper Tube Handbook."
- C. Install non-potable water piping level and plumb.
- D. Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas.
- E. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- F. Install piping adjacent to equipment and specialties to allow service and maintenance.
- G. Install piping to permit valve servicing.
- H. Install nipples, unions, special fittings, and valves with pressure ratings the same as or higher than system pressure rating used in applications below unless otherwise indicated.
- I. Install piping free of sags and bends.
- J. Install fittings for changes in direction and branch connections.
- K. Install unions in copper tubing at final connection to each piece of equipment, machine, and specialty.
- L. Install sleeves for piping penetrations of walls, ceilings, and floors.

3.2 JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.
- C. Brazed Joints: Join copper tube and fittings according to CDA's "Copper Tube Handbook," "Brazed Joints" Chapter.
- D. Soldered Joints: Apply ASTM B 813, water-flushable flux to end of tube. Join copper tube and fittings according to ASTM B 828 or CDA's "Copper Tube Handbook."
- E. Flanged Joints: Select appropriate asbestos-free, nonmetallic gasket material in size, type, and thickness suitable for non-potable water service. Join flanges with gasket and bolts according to ASME B31.9.

F. Dissimilar-Material Piping Joints: Make joints using adapters compatible with materials of both piping systems.

3.3 VALVE INSTALLATION

- A. Install shutoff valve close to water main on each branch and riser serving plumbing fixtures or equipment, on each water supply to equipment, and on each water supply to plumbing fixtures that do not have supply stops. Use ball or gate valves for piping NPS 3 and smaller. Use butterfly or gate valves for piping NPS 4 and larger.
- B. Install drain valves for equipment at base of each water riser, at low points in horizontal piping, and where required to drain water piping. Drain valves are specified in Division 22 Section "Non-potable Water Piping Specialties."
 - 1. Hose-End Drain Valves: At low points in water mains, risers, and branches.
 - 2. Stop-and-Waste Drain Valves: Instead of hose-end drain valves where indicated.

3.4 TRANSITION FITTING INSTALLATION

- A. Install transition couplings at joints of dissimilar piping.
- B. Transition Fittings in Underground Non-potable Water Piping:
 - 1. NPS 1-1/2 and Smaller: Fitting-type coupling.

3.5 HANGER AND SUPPORT INSTALLATION

- A. Comply with requirements in Division 22 Section "Hangers and Supports for Plumbing Piping and Equipment" for pipe hanger and support products and installation.
 - 1. Vertical Piping: MSS Type 8 or 42, clamps.
 - 2. Individual, Straight, Horizontal Piping Runs:
 - a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
 - b. Longer Than 100 Feet: MSS Type 43, adjustable roller hangers.
 - 3. Base of Vertical Piping: MSS Type 52, spring hangers.
- B. Support vertical piping and tubing at base and at each floor.
- C. Rod diameter may be reduced one size for double-rod hangers, to a minimum of 3/8 inch.
- D. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:

- 1. NPS 3/4 and Smaller: 60 inches with 3/8-inch rod.
- 2. NPS 1 and NPS 1-1/4: 72 inches with 3/8-inch rod.
- 3. NPS 1-1/2 and NPS 2 : 96 inches with 3/8-inch rod.
- 4. NPS 2-1/2: 108 inches with 1/2-inch rod.
- 5. NPS 3 to NPS 5: 10 feet with 1/2-inch rod.
- 6. NPS 6: 10 feet with 5/8-inch rod.
- E. Install supports for vertical copper tubing every 10 feet.
- F. Support piping and tubing not listed in this article according to MSS SP-69 and manufacturer's written instructions.

3.6 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment and machines to allow service and maintenance.
- C. Connect non-potable water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials.
 - 1. Connect non-potable water piping to water-service piping with shutoff valve.

3.7 IDENTIFICATION

A. Identify system components. Label pressure piping with system operating pressure.

3.8 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Piping Inspections:
 - 1. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.
 - 2. During installation, notify authorities having jurisdiction at least one day before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:
 - a. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.

- b. Final Inspection: Arrange final inspection for authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
- 3. Reinspection: If authorities having jurisdiction find that piping will not pass tests or inspections, make required corrections and arrange for reinspection.
- 4. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

C. Piping Tests:

- 1. Fill non-potable water piping. Check components to determine that they are not air bound and that piping is full of water.
- 2. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit a separate report for each test, complete with diagram of portion of piping tested.
- 3. Leave new, altered, extended, or replaced non-potable water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or concealed before it was tested.
- 4. Cap and subject piping to static water pressure not less than the working pressure of the system, or by an air test of not less than 50 psig, without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for at least one hour. Leaks and loss in test pressure constitute defects that must be repaired. The water used for testing must be obtained from a non-potable source.
- 5. Repair leaks and defects with new materials and retest piping or portion thereof until satisfactory results are obtained.
- 6. Prepare reports for tests and for corrective action required.
- D. Non-potable water piping will be considered defective if it does not pass tests and inspections.
- E. Prepare test and inspection reports.

3.9 CLEANING

- A. Clean and disinfect non-potable water piping IN ACCORDANCE NYS DEPARTMENT OF HEALTH PROCEDURES or as follows:
 - 1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.

- 2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction; if methods are not prescribed, use procedures described in either AWWA C651 or AWWA C652 or follow procedures described below:
 - a. Flush piping system with clean, water until dirty water does not appear at outlets.
 - b. Fill and isolate system according to either of the following:
 - 1) Fill system or part thereof with water/chlorine solution with at least 50 ppm of chlorine. Isolate with valves and allow to stand for 24 hours.
 - 2) Fill system or part thereof with water/chlorine solution with at least 200 ppm of chlorine. Isolate and allow to stand for three hours.
 - c. Flush system with clean, water until no chlorine is in water coming from system after the standing time.
 - d. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedures if biological examination shows contamination.
- B. Prepare and submit reports of purging and disinfecting activities.
- C. Clean interior of non-potable water piping system. Remove dirt and debris as work progresses.

3.10 PIPING SCHEDULE

- A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.
- B. Flanges and unions may be used for aboveground piping joints unless otherwise indicated.
- C. Aboveground non-potable water piping, NPS 4 and smaller, shall be the following:
 - 1. Hard copper tube, ASTM B 88, Type L; wrought copper solder-joint fittings; and soldered joints.

3.11 VALVE SCHEDULE

- A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
 - 1. Shutoff Duty: Use ball valves for piping NPS 3 and smaller. Use butterfly, ball, or gate valves with flanged ends for piping NPS 4 and larger.
 - 2. Drain Duty: Hose-end drain valves.

DIVISION 26 - ELECTRICAL

SECTION 26 05 00

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Electrical equipment coordination and installation.
 - 2. Sleeves for raceways and cables.
 - 3. Sleeve Seals
 - 4. Common electrical installation requirements.

1.3 **DEFINITIONS**

- A. EPDM: Ethylene-propylene-diene terpolymer rubber.
- B. NBR: Acrylonitrile-butadiene rubber.

1.4 COORDINATION

- A. Coordinate arrangement, mounting, and support of electrical equipment:
 - 1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
 - 2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
 - 3. To allow right of way for piping and conduit installed at required slope.
 - 4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.
- B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

PART 2 PRODUCTS

2.1 REFER TO SCHEDULES AND EQUIPMENT NOTES ON DRAWINGS FOR BASIS OF DESIGN MATERIALS, MANUFACTURERS AND MODEL NUMBERS.

2.2 SLEEVES FOR RACEWAYS AND CABLES

A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.

2.3 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 - 1. Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 - 2. Pressure Plates: Carbon steel. Include two for each sealing element.
 - 3. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.4 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such

a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

E. Right of Way: Give to piping systems installed at a required slope.

3.2 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- E. Cut sleeves to length for mounting flush with both surfaces of walls.
- F. Extend sleeves installed in floors 2 inches above finished floor level.
- G. Size pipe sleeves to provide 1/4-inch annular clear space between sleeve and raceway or cable, unless indicated otherwise.
- H. Seal space outside of sleeves with grout for penetrations of concrete and masonry
 - 1. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
- I. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials. Comply with requirements in Division 07 Section, "Penetration Firestopping."
- J. Aboveground, Exterior-Wall Penetrations: Seal penetrations using steel pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch annular clear space between pipe and sleeve for installing mechanical sleeve seals.

3.3 SLEEVE-SEAL INSTALLATION

- A. Install to seal exterior wall penetrations.
- B. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve.

Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.4 FIRESTOPPING

A. Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section, "Penetration Firestopping."

SECTION 26 05 19

LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 **RELATED DOCUMENTS**

Drawings and general provisions of the Contract, including General and Supplementary Α. Conditions and Division 01 Specification Sections, apply to this Section.

1.2 **SUMMARY**

- This Section includes the following: A.
 - Building wires and cables rated 600 V and less. 1.
 - 2. Connectors, splices, and terminations rated 600 V and less.

1.3 **DEFINITIONS**

- EPDM: Ethylene-propylene-diene terpolymer rubber. Α.
- В. NBR: Acrylonitrile-butadiene rubber.

1.4 **SUBMITTALS**

- Product Data: For each type of product indicated. A.
- B. Qualification Data: For testing agency.
- C. Field quality control test reports.

1.5 **QUALITY ASSURANCE**

- Testing Agency Qualifications: An independent agency, with the experience and A. capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.
 - 1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.

- В. 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.
- C. Comply with NFPA 70.

PART 2 PRODUCTS

2.1 **CONDUCTORS AND CABLES**

- Available Manufacturers: Subject to compliance with requirements, manufacturers A. offering products that may be incorporated into the Work include, but are not limited to, the following:
- В. Aluminum and Copper Conductors: Comply with NEMA WC 70.
- C. Conductor Insulation: Comply with NEMA WC 70 for Types THHN-THWN.

CONNECTORS AND SPLICES 2.2

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- В. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

PART 3 EXECUTION

3.1 **CONDUCTOR MATERIAL APPLICATIONS**

- A. Feeders: Copper unless otherwise indicated on drawings. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- В. Branch Circuits: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- Exposed Feeders: Type THHN-THWN, single conductors in raceway. A.
- Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN-THWN, В. single conductors in raceway.
- C. Exposed Branch Circuits, Including in Crawlspaces: Type THHN-THWN, single conductors in raceway.

Branch Circuits Concealed in Ceilings, Walls, and Partitions: Metal-clad cable, Type MC, or D. single conductors in raceway.

3.3 **INSTALLATION OF CONDUCTORS AND CABLES**

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.
- Install exposed cables parallel and perpendicular to surfaces of exposed structural D. members, and follow surface contours where possible.
- E. Support cables according to Division 26 Section, "Hangers and Supports for Electrical Systems."
- F. Identify and color code conductors and cables according to Division 26 Section, "Identification for Electrical Systems."

3.4 **CONNECTIONS**

- A. Tighten electrical connectors and terminals according to manufacturer's published torquetightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
 - 1. Use oxide inhibitor in each termination and splice for aluminum conductors.

3.5 FIELD QUALITY CONTROL

- Testing Agency: Engage a qualified testing agency to perform tests and inspections and A. prepare test reports.
- В. Perform tests and inspections and prepare test reports.
- C. Tests and Inspections:
 - After installing conductors and cables and before electrical circuitry has been 1. energized, test feeder conductors for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.

- D. Test Reports: Prepare a written report to record the following:
 - 1. Test procedures used.
 - 2. Test results that comply with requirements.
 - 3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- E. Remove and replace malfunctioning units and retest as specified above.

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes: Grounding systems and equipment.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Informational Submittals: Plans showing dimensioned as-built locations of grounding features specified in "Field Quality Control" Article, including the following:
 - 1. Grounding conductors.
- C. Qualification Data: For qualified testing agency and testing agency's field supervisor.
- D. Field quality-control reports.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Member company of NETA or an NRTL.
 - 1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise onsite testing.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with UL 467 for grounding and bonding materials and equipment.

PART 2 PRODUCTS

2.1 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:

- 1. Solid Conductors: ASTM B 3.
- 2. Stranded Conductors: ASTM B 8.
- 3. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.

2.2 CONNECTORS

- A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy, pressure type with at least two bolts.
 - 1. Pipe Connectors: Clamp type, sized for pipe.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- D. Bus-bar Connectors: Mechanical type, cast silicon bronze, solderless exothermic-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

PART 3 EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.
- B. Conductor Terminations and Connections:
 - 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 - 2. Connections to Structural Steel: Welded connectors.

3.2 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. Feeders and branch circuits.
 - 2. Lighting circuits.
 - 3. Receptacle circuits.

- 4. Single-phase motor and appliance branch circuits.
- 5. Three-phase motor and appliance branch circuits.
- 6. Flexible raceway runs.
- 7. Armored and metal-clad cable runs.

3.4 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Grounding and Bonding for Piping:
 - 1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
 - 2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
 - 3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.
- C. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install bonding jumper to bond across flexible duct connections to achieve continuity.
- D. Grounding for Steel Building Structure: Install a driven ground rod at base of each corner column.

3.5 LABELING

A. Comply with requirements in Division 26 Section "Identification for Electrical Systems" Article for instruction signs. The label or its text shall be green.

3.6 FIELD QUALITY CONTROL

- A. Tests and Inspections:
 - 1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.

- 2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.
- 3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal. Make tests at ground rods before any conductors are connected.
 - a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
 - b. Perform tests by fall-of-potential method according to IEEE 81.
- B. Grounding system will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.
- D. Report measured ground resistances that exceed the following values:
 - 1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 10 ohms.
 - 2. Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 5 ohms.
 - 3. Power and Lighting Equipment or System with Capacity More Than 1000 kVA: 3 ohms.
- E. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Hangers and supports for electrical equipment and systems.

1.3 DEFINITIONS

- A. EMT: Electrical metallic tubing.
- B. IMC: Intermediate metal conduit.
- C. RMC: Rigid metal conduit.

1.4 PERFORMANCE REQUIREMENTS

- A. Design supports for multiple raceways capable of supporting combined weight of supported systems and its contents.
- B. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- C. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of five times the applied force.

1.5 SUBMITTALS

- A. Product Data: For the following:
 - 1. Steel slotted support systems.
- B. Shop Drawings: Show fabrication and installation details and include calculations for the following:
 - 1. Trapeze hangers. Include Product Data for components.
 - 2. Steel slotted channel systems. Include Product Data for components.

3. Equipment supports.

1.6 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code Steel."
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.1 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

- A. Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly.
 - 1. Metallic Coatings: Hot-dip galvanized after fabrication and applied according to MFMA-4.
 - 2. Nonmetallic Coatings: Manufacturer's standard PVC, polyurethane, or polyester coating applied according to MFMA-4.
 - 3. Channel Dimensions: Selected for applicable load criteria.
- B. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- C. Conduit and Cable Support Devices: Steel hangers, clamps, and associated fittings, designed for types and sizes of raceway or cable to be supported.

Mounting, Anchoring, and Attachment Components: Items for fastening electrical items or their supports to building surfaces include the following:

- 1. Clamps for Attachment to Steel Structural Elements: MSS SP-58, type suitable for attached structural element.
- 2. Through Bolts: Structural type, hex head, and high strength. Comply with ASTM A 325.
- 3. Toggle Bolts: All-steel springhead type.
- 4. Hanger Rods: Threaded steel.

2.2 FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES

- A. Description: Welded or bolted, structural-steel shapes, shop or field fabricated to fit dimensions of supported equipment.
- B. Materials: Comply with requirements in Division 05 Section "Metal Fabrications" for steel shapes and plates.

PART 3 EXECUTION

3.1 APPLICATION

- A. Comply with NECA 1 and NECA 101 for application of hangers and supports for electrical equipment and systems except if requirements in this Section are stricter.
- B. Maximum Support Spacing and Minimum Hanger Rod Size for Raceway: Space supports for EMT, IMC, and RMC as scheduled in NECA 1, where its Table 1 lists maximum spacings less than stated in NFPA 70. Minimum rod size shall be 1/4 inch in diameter.
- C. Multiple Raceways: Install trapeze-type supports fabricated with steel slotted support system, sized so capacity can be increased by at least 25 percent in future without exceeding specified design load limits.
 - 1. Secure raceways and cables to these supports with two-bolt conduit clamps.
- D. Spring-steel clamps designed for supporting single conduits without bolts may be used for 1-1/2-inch and smaller raceways serving branch circuits and communication systems above suspended ceilings and for fastening raceways to trapeze supports.

3.2 SUPPORT INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except as specified in this Article.
- B. Raceway Support Methods: In addition to methods described in NECA 1, EMT may be supported by openings through structure members, as permitted in NFPA 70.
- C. Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.
- D. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
 - 1. To New Concrete: Bolt to concrete inserts.
 - 2. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
 - 3. To Existing Concrete: Expansion anchor fasteners.
 - 4. Instead of expansion anchors, powder-actuated driven threaded studs provided with lock washers and nuts may be used in existing standard-weight concrete 4 inches

- thick or greater. Do not use for anchorage to lightweight-aggregate concrete or for slabs less than 4 inches thick.
- 5. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
- 6. To Light Steel: Sheet metal screws.
- E. Drill holes for expansion anchors in concrete at locations and to depths that avoid reinforcing bars.

3.3 INSTALLATION OF FABRICATED METAL SUPPORTS

- A. Comply with installation requirements in Division 05 Section "Metal Fabrications" for site-fabricated metal supports.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor electrical materials and equipment.
- C. Field Welding: Comply with AWS D1.1/D1.1M.

3.4 PAINTING

- A. Touchup: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting. Comply with SSPC-PA 1 requirements for touching up field-painted surfaces.
 - 1. Apply paint by brush or spray to provide minimum dry film thickness of 2.0 mils.
- B. Touchup: Comply with requirements in Division 09 painting Sections for cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint on miscellaneous metal.
- C. Galvanized Surfaces: Clean welds, bolted connections, and abraded areas and apply galvanizing-repair paint to comply with ASTM A 780.

SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

1.3 DEFINITIONS

- A. EMT: Electrical metallic tubing.
- B. ENT: Electrical nonmetallic tubing.
- C. EPDM: Ethylene-propylene-diene terpolymer rubber.
- D. FMC: Flexible metal conduit.
- E. IMC: Intermediate metal conduit.
- F. LFMC: Liquidtight flexible metal conduit.
- G. LFNC: Liquidtight flexible nonmetallic conduit.
- H. NBR: Acrylonitrile-butadiene rubber.
- I. RNC: Rigid nonmetallic conduit.

1.4 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

1.5 QUALITY ASSURANCE

- A. 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.
- B. Comply with NFPA 70.

PART 2 PRODUCTS

2.1 METAL CONDUIT AND TUBING

- A. Rigid Steel Conduit: ANSI C80.1.
- B. IMC: ANSI C80.6.
- C. PVC-Coated Steel Conduit: PVC-coated rigid steel conduit.
 - 1. Comply with NEMA RN 1.
 - 2. Coating Thickness: 0.040 inch, minimum.
- D. EMT: ANSI C80.3.
- E. FMC: Zinc-coated steel.
- F. LFMC: Flexible steel conduit with PVC jacket.
- G. Fittings for Conduit (Including all Types and Flexible and Liquidtight), EMT, and Cable: NEMA FB 1; listed for type and size raceway with which used, and for application and environment in which installed.
 - 1. Conduit Fittings for Hazardous (Classified) Locations: Comply with UL 886.
 - 2. Fittings for EMT: Steel, set-screw type.
 - 3. Coating for Fittings for PVC-Coated Conduit: Minimum thickness, 0.040 inch, with overlapping sleeves protecting threaded joints.
- H. Joint Compound for Rigid Steel Conduit or IMC: Listed for use in cable connector assemblies, and compounded for use to lubricate and protect threaded raceway joints from corrosion and enhance their conductivity.

2.4 BOXES, ENCLOSURES, AND CABINETS

- A. Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- B. Sheet Metal Pull and Junction Boxes: NEMA OS 1.

PART 3 EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
 - 1. Exposed Conduit: Rigid steel conduit.

- 2. Concealed Conduit, Aboveground: EMT.
- 3. Underground Conduit: RNC, Type EPC-80-PVC, direct buried.
- 4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
- 5. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
- B. Comply with the following indoor applications, unless otherwise indicated:
 - 1. Exposed, Not Subject to Physical Damage: EMT.
 - 2. Exposed, Not Subject to Severe Physical Damage: EMT.
 - 3. Exposed and Subject to Severe Physical Damage: Rigid steel conduit.
 - 4. Concealed in Ceilings and Interior Walls and Partitions: EMT.
 - 5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
 - 6. Damp or Wet Locations: Rigid steel conduit.
 - 7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4, stainless steel in damp or wet locations.
- C. Minimum Raceway Size: 3/4-inch trade size.
- D. Raceway Fittings: Compatible with raceways and suitable for use and location.
 - 1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
 - 2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with that material. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer.

3.2 INSTALLATION

- A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.
- B. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- C. Complete raceway installation before starting conductor installation.

- D. Support raceways as specified in Division 26 Section "Hangers and Supports for Electrical Systems."
- E. Arrange stub-ups so curved portions of bends are not visible above the finished slab.
- F. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.
- G. Conceal conduit and EMT within finished walls, ceilings, and floors, unless otherwise indicated.
- H. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of raceway and fittings before making up joints. Follow compound manufacturer's written instructions.
- I. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.
- J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
- K. Flexible Conduit Connections: Use maximum of 48 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
 - 1. Use LFMC in damp or wet locations subject to severe physical damage.
 - 2. Use LFMC or LFNC in damp or wet locations not subject to severe physical damage.

3.3 PROTECTION

- A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
 - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 - 2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Identification for raceways.
 - 2. Identification for conductors.
 - 3. Warning labels and signs.
 - 4. Equipment identification labels.
 - 5. Miscellaneous identification products.

1.3 QUALITY ASSURANCE

- A. Comply with ANSI A13.1.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Comply with ANSI Z535.4 for safety signs and labels.
- E. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

1.4 COORDINATION

A. Coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and the Operation and Maintenance Manual; and with those required by codes, standards, and 29 CFR 1910.145. Use consistent designations throughout Project.

- B. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.
- C. Coordinate installation of identifying devices with location of access panels and doors.
- D. Install identifying devices before installing acoustical ceilings and similar concealment.

PART 2 PRODUCTS

2.1 POWER RACEWAY IDENTIFICATION MATERIALS

- A. Comply with ANSI A13.1 for minimum size of letters for legend and for minimum length of color field for each raceway size.
- B. Colors for Raceways Carrying Circuits at 600 V or Less:
 - 1. Black letters on an orange field
 - 2. Legend: Indicate voltage.
- C. Self-Adhesive Vinyl Labels for Raceways Carrying Circuits at 600 V or Less: Preprinted, flexible label laminated with a clear, weather- and chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.2 CONDUCTOR IDENTIFICATION MATERIALS

- A. Color-Coding Conductor Tape: Colored, self-adhesive vinyl tape not less than 3 mils thick by 1 to 2 inches wide.
- B. Self-Adhesive Vinyl Labels: Preprinted, flexible label laminated with a clear, weatherand chemical-resistant coating and matching wraparound adhesive tape for securing ends of legend label.

2.3 EQUIPMENT IDENTIFICATION LABELS

A. Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Verify identity of each item before installing identification products.
- B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.
- C. Apply identification devices to surfaces that require finish after completing finish work.

- D. Self-Adhesive Identification Products: Clean surfaces before application, using materials and methods recommended by manufacturer of identification device.
- E. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
- F. System Identification Color-Coding Bands for Raceways and Cables: Each color-coding band shall completely encircle cable or conduit. Place adjacent bands of two-color markings in contact, side by side. Locate bands at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
- G. Underground-Line Warning Tape: During backfilling of trenches install continuous underground-line warning tape directly above line at 12 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench exceeds 16 inches overall. Align tape along the width and along the centerline of conduit.
- H. Painted Identification: Comply with requirements in Division 09 painting Sections for surface preparation and paint application.

3.2 IDENTIFICATION SCHEDULE

- A. Accessible Raceways and Metal-Clad Cables, 600 V or Less, for Service, Feeder, and Branch Circuits More Than 30 A, and 120V to ground: Identify with self-adhesive vinyl label. Install labels at 30-foot maximum intervals.
- B. Accessible Raceways and Cables within Buildings: Identify the covers of each junction and pull box of the following systems with self-adhesive vinyl labels with the wiring system legend and system voltage.
- C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use color-coding conductor tape to identify the phase.
 - 1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.
 - a. Color shall be factory applied or field applied for sizes larger than No. 8 AWG, if authorities having jurisdiction permit.
 - b. Colors for 208/120-V Circuits:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.

- c. Colors for 480/277-V Circuits:
 - 1) Phase A: Brown.
 - 2) Phase B: Orange.
 - 3) Phase C: Yellow.
- d. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches from terminal points and in boxes where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding. Locate bands to avoid obscuring factory cable markings.
- D. Workspace Indication: Install floor marking tape to show working clearances in the direction of access to live parts. Workspace shall be as required by NFPA 70 and 29 CFR 1926.403 unless otherwise indicated. Do not install at flush-mounted panelboards and similar equipment in finished spaces.
- E. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification.

1. Labeling Instructions:

- a. Indoor Equipment: Engraved, laminated acrylic or melamine label. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch- high label; where two lines of text are required, use labels 2 inches high.
- b. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
- c. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
- d. Unless provided with self-adhesive means of attachment, fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

2. Equipment to Be Labeled:

- a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be engraved, laminated acrylic or melamine label.
- b. Enclosures and electrical cabinets.

- c. Emergency system boxes and enclosures.
- d. Enclosed switches.