

April 15, 2024

PROJECT MANUAL

VOLUME 1 OF 4: Divisions 00 - 02

Newburgh Enlarged City School District New CTE Building

CTE Building

SED No. 44-16-00-01-0-053-001

CSArch Project # 108-2303.00



REGISTRATION EXPIRATION DATE: 12/31/2026

The design of this project conforms to applicable provisions of the New York State Uniform Fire Prevention and Building Code the New York State Energy Conservation Construction Code and the Manual of Planning Standards of the New York State Education Department

CSARCH

SECTION 000010 - CERTIFICATION PAGE

PROJECT TEAM

PROFESSIONAL SEAL

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Richard L. Peckham AIA,
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Plumbing, Fire Protection, Electrical Engineer

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Expiration Date: 5/31/2024



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Mechanical Engineer

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Zachary Robert Malison, PE
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Electrical Engineer

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Albany, NY 12207-2905
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James R. Barrett, PE
Expiration Date: 5/31/2026



Certification to Provide Engineering Services

Collins+Scoville Architecture | Engineering | Construction Management DPC dba CSArch
Certificate Number: 0020249

Passero Associates
Certificate Number: 0021475

M/E Engineering
Certificate Number: 0018443

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MECHANICAL GENERAL DRAWING

MG000 GENERAL NOTES, LEGENDS AND ABBREVIATIONS

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TR504 STUDIO & PHOTO LAB RIGGING SYSTEM DETAILS - AREA '3'
TR505 STUDIO & PHOTO LAB RIGGING SYSTEM DETAILS - AREA '3'
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TR507 STUDIO & PHOTO LAB RIGGING SYSTEM DETAILS - AREA '3'
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TS402 GYMNASIUM SOUND SYSTEM SINGLE LINE DIAGRAM
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END OF DOCUMENT 000115

SECTION 001116 – ADVERTISEMENT FOR BIDS

Architect

CSArch
19 Front Street
Newburgh, New York 12550

PH: 845-561-3179

Project Information

Newburgh Enlarged City School District,
201 Fullerton Ave
Newburgh, New York 12550

New CTE Building

The Owner, Newburgh Enlarged City School District, will receive sealed bids to furnish materials and labor to complete the New CTE building (CTE). Each bid shall be on a stipulated sum basis for the following prime contracts:

Contract No. 01 GC-01 – General Construction / Site Work Construction

Contract No. 02 MC-01 – Mechanical Construction

Contract No. 03 PC-01 – Plumbing Construction

Contractor No. 04 EC-01 – Electrical Construction

Contractor No. 05 FP-01 – Fire Protection Construction

Bids shall not include New York State sales and compensating use taxes on materials and supplies incorporated into the Work, the Owner being exempt therefrom. One copy of sealed bids in an envelope with contract no., company name, address, project title and hand delivered to Newburgh Enlarged City School District, 124 Grand Street, Newburgh, NY 12550 Attn: Purchasing Agent no later than **3:00 PM. on Thursday May 23rd, 2024**. One copy of bid in PDF format to be emailed no later than the next day before close of business for record keeping purposes. Bids received after 3:00 PM on May 23rd, 2024 will not be accepted and returned to the Bidder unopened at the bidder's expense. Bids will be opened publicly and read aloud after the specified receipt time. All interested parties are invited to attend.

It is the intention of this Project to be both environmentally and fiscally conscious of paper use and consumption. Therefore, documents will be distributed as digital sets. Bidding Documents, Drawings and Specifications, may be viewed online free of charge beginning **April 15, 2024** at www.csarchplanroom.com under "public projects," or electronically downloaded for a non-refundable charge of one-hundred dollars (\$100.00.)

Complete sets of Bidding Documents, Drawings and Specifications, on compact disc (CD) in PDF format may be obtained from Rev, 28 Church Street, Unit 7, Warwick, New York 10990 Tel: (877) 272-0216 upon depositing the sum of one hundred dollars (\$100.00) for each combined set of documents. Checks or money orders shall be made payable to Newburgh Enlarged City School District.

All bid addenda will be transmitted to registered plan holders via e-mail and will be available on www.csarchplanroom.com. Plan holders who have paid for hard copies of the bid documents will need to make the determination if hard copies of the addenda are required for their use and coordinate directly with the printer for hard copies of addenda to be issued. There will be no charge for registered plan holders to obtain hard copies of the bid addenda.

Each Bidder must deposit a Bid Security in the amount and form per the conditions provided in Instructions to Bidders. All Bids will remain subject to acceptance for forty-five (45) days after the Bid opening. Owner may, in its sole discretion, release any Bid and return Bid Security prior to that date.

A full performance bond, together with labor and material payment bonds in the form acceptable to the Owner, shall be required of the successful Bidder for the full contract amount.

The award of the bid pursuant to this notice is subject to the appropriation of funds for this purpose in accordance with the applicable provisions of the General Municipal Law. All bids must meet the requirements of the General Municipal law of the State of New York and all other applicable statutes and have attached a statement of non-collusion. All documents submitted in connection with this bid will become the property of the Newburgh Enlarged City School District, and the district will not return bids or bid documents.

The contract will be awarded by the school district to the lowest responsible bidder. In cases where two or more responsible Bidders submit identical bids as to price, the school district may award the contract to either of such bidders. The school district reserves the right to reject all bids and re-advertise for new bids at its discretion and/or to waive any informality in any bid which it deems immaterial in nature.

Pre-Bid Conferences will be held on April 29th, 2024 at 3:00 PM at Newburgh Free Academy Main, 201 Fullerton Ave, Newburgh, NY 12550, Newburgh Free Academy Cafeteria. Contractor must report to the lower entrance off the main parking lot and present a valid government issued driver's license or ID to security to be processed through the Raptor System starting at 2:45 pm. after school lets out. Use this page to verify identification as a Bidder at Building security. Attendance at this meeting is requested as the Owner, Architect, Construction Manager and consultants will be present to discuss the Project. Attendees should anticipate a Q & A session followed by a walk-through of the new construction site. All questions must be submitted formally through the RFI process. The Architect will transmit to all listed Bidders record of Addenda in response to questions arising after bid Conference.

This project is publicly funded. The Bidders must comply with New York State Department of Labor Prevailing Wage Rate Schedule and conditions of employment. This Contract is subject to a Project Labor Agreement ("PLA") entered into between the Newburgh Enlarged City School District ("Owner") and Hudson Valley Building and Construction Trade Council, on behalf of itself

and its affiliated Local Unions and signatory Local Unions on behalf of themselves and their members . By submitting a Bid, the contractor agrees that the PLA is binding on the Contractor and Subcontractors of all tiers. Please refer to the Bid Documents for further information. The Bidders to be awarded the Contract, as well as the Bidder's Subcontractors, will be required to execute a "Letter of Assent" prior to the award. Failure to execute the Letter of Assent will result in rejection of the Bidder.

The bidder is advised to review the PLA and the Letter of Assent, all of which are attached to AIA Document A232-2009 General Conditions of the Contract for Construction.

The Newburgh Enlarged City School District reserves the right to waive any informalities or irregularities in the Bids received, or to reject all Bids without explanation.

By Order Of:

Newburgh Enlarged City School District

END OF SECTION 001116

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DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS

PART 1 – DEFINITIONS

- A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Invitation to Bid, Instruction to Bidders, the Bid Form, Supplementary Bid Forms and other sample bidding and contract forms.
- B. The proposed Contract Documents include the Contract Forms between the Owner and Contractor, Contractor's executed Bid Form and executed Supplementary Bid Forms, Conditions of the Contract (General, supplemental, and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.
- C. Definitions set forth in the General Conditions of the Contract of Construction, or in other Contract Documents are applicable to the Bidding Documents.
- D. Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- E. A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
 - 1. Wherever the word "Bid" occurs in the documents, it refers to the Bidder's Proposal.
- F. The Base Bid is an amount stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents.
- G. An Alternate is an amount stated on the Bid Form to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- H. A Unit Price is an amount stated on the Bid Form as a price per unit of measurement for materials, equipment for services or a portion of the Work as described in the Bidding Documents.
- I. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
 - 1. A Sub-bidder is a person or entity who submits a Bid to a Bidder for materials, equipment, or labor for a portion of the Work.

PART 2 – BIDDER'S REPRESENTATIONS

- A. The Bidder by making a Bid represents that:
1. The Bidder has read and understands the Bidding Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being Bid concurrently or presently under construction.
 2. The Bid is made in compliance with the Bidding Documents.
 3. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
 - a. Bidders may visit the existing site by making prior arrangements with Thomas Ritzenthaler, CSArch at 845-561-3179.
 4. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.
 5. No official, officer or agent of the Owner is authorized to make any representations as to the materials or workmanship involved or the conditions to be encountered and the Bidder agrees that no such statement or the evidence of any documents or plans, not a part of the Bidding Documents, shall constitute any grounds for claim as to conditions encountered. No verbal agreement or conversation with any officer, agent, or employee of the Owner either before or after the execution of this Contract shall affect or modify any of the terms or obligations herein contained.
- B. Each Bidder is required to form an individual opinion of the quantities and character of construction work by personal examination of the site and all existing facilities where the project work is to be done, and of the plans and specifications relating to it by such means as is preferred. Each Bidder shall inspect accessible concealed areas of existing construction, provided no significant permanent damage is inflicted upon the property. Lack of knowledge about conditions in accessible concealed areas shall not be the basis for additional cost claims at a later time.
- C. The Bidder's attention has been directed to the fact that all applicable state laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they are deemed to be included in the Contract Documents the same as though herein written out in full. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the Work as drawn and specified in the Contract Documents. By submitting a Bid, the

Bidder acknowledges that if awarded the Contract it shall be required to observe all laws and ordinances including, but not limited to, relating to the obstructing of streets, maintaining signals, keeping open passageways, and protecting them where exposed to danger, and all general ordinances affecting it, its employees, or its work hereunder in its relations to the Owner or any person. By submitting a Bid, the Bidder acknowledges that if awarded the Contract it shall also obey all laws and ordinances controlling or limiting the Contractor while engaged in the prosecution of the Work under the Contract.

- D. The Bidder's attention is directed to the fact that Each Contractor shall pay not less than the minimum hourly wage rates on those contracts as established in accordance with Section 220 of the Labor Law as shown in the schedule included in the Bidding Documents. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides (among other things) that it shall be the duty of the fiscal officer to make a determination of the schedule of wages to be paid to all laborers, workers and mechanics employed on public work projects, including supplements for welfare, pension, vacation, and other benefits. These supplements include hospital, surgical or medical insurance, or benefits; life insurance or death benefits; accidental death or dismemberment insurance; and pension or retirement benefits. If the amount of supplements provided by the employer is less than the total supplements shown on the wage schedule, the difference shall be paid in cash to the employee. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, also provides that the supplements to be provided to laborers, workers, and mechanics upon public work, "...shall be in accordance with the prevailing practices in the locality...." The amount for supplements listed on the enclosed schedule does not necessarily include all types of prevailing supplements in the locality, and a future determination of the Industrial Commissioner may require the Contractor to provide additional supplements. The original payrolls or transcripts shall be preserved for three (3) years from the completion of the Work on the awarded project by the Contractor. The Owner shall receive such payroll record upon completion of the Project.

PART 3 – BIDDING DOCUMENTS

3.1 COPIES

- A. It is the intention of this Project to be both environmentally and fiscally conscious of paper use and consumption. Therefore, documents will be distributed as digital sets in PDF format. Bidding Documents, Drawings, and Specifications, may be viewed online free of charge beginning on **April 15, 2024**, at www.csarchplanroom.com or www.usinglesspaper.com under Public Projects or

electronically downloaded for a non-refundable charge of one-hundred dollars (\$100.00.)

1. Please note, in order to access online documents and information, a log in is required. New users can create a free online account upon visiting site by clicking "Register for an Account."
- B. Complete sets of Bidding Documents, Drawings, and Specifications, in PDF format (not CAD format) on compact disc (CD) may be obtained from Rev, 28 Church Street, Unit #7, Warwick, NY 10990 Tel: (877) 272-0216, upon depositing the sum of one hundred dollars (\$100.00) for each combined set of documents. Checks or money orders shall be made payable to Newburgh Enlarged City School District.
1. Deposit is refundable in accordance with the terms in the Instructions to Bidders to all submitting bids. Any Bidder requiring CD(s) to be shipped shall make arrangements with the printer and pay for all packaging and shipping costs.
 2. Any Bidder requiring paper copies of the Bidding Documents, Drawings, and Specifications, shall make arrangements with the printer, and pay for all printing, packaging, and shipping costs. Such costs are non-refundable.
- C. All Bid Addenda will be transmitted to registered plan holders via email in PDF format and will be available at www.csarchplanroom.com. Plan holders who have paid for CDs or hard copies of the Bidding Documents will need to make the determination if hard copies of the Addenda are required for their use, and coordinate directly with the printer for hard copies of Addenda to be issued.
1. There will be no charge for registered plan holders to obtain hard copies of the Bid Addenda.
- D. Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- E. The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- A. The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being Bid concurrently or presently under

construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered. All reports to the Architect shall be in writing.

- B. No interpretation of the meaning of the Contract Documents, the existing conditions, or of the scope of Work will be made verbally. Provide every request for such interpretation in writing, addressed to CSArch, Attention Joseph Metzger, 40 Beaver Street, Albany, New York 12207 or by e-mail: jmetzger@csarchpc.com, with copy to rpeckham@csarchpc.com, tritzenthaler@csarchpc.com. To provide consideration RFI must be received at least seven (7) working days prior to the date of the Bid Opening.
- C. Interpretations, corrections, and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections, and changes of the Bidding Documents made in any other manner will not be binding, and Bidders are not required to rely upon them.
- D. The Bidding Documents for this Project have been prepared using certain existing construction documents furnished by the Owner, which pertain to the construction of the existing conditions, and limited observations obtained by the Architect at the Project site.
 - 1. More extensive investigations of existing conditions, including disassembly, or testing of existing building components, was not undertaken by the Architect.
 - 2. Portrayal of such existing conditions obscured or concealed from the Owner or Architect's view prior to the start of this Project's construction activities, is based on reasonable implications and assumptions. The Owner and Architect do not imply or guarantee to the Bidders, in any way, that such portrayals are accurate or true existing conditions.
- E. In the absence of an interpretation by the Architect, should the Drawings disagree in themselves or with the Specifications, the better quality, the more costly or the greater quantity of work or materials shall be estimated upon, and unless otherwise determined, shall be furnished.

3.3 EQUIVALENTS

- A. The materials, products and equipment described in the Bidding Documents establish as standard of required function, dimension, appearance, and quality to be met by any proposed substitution and/or comparable product/equivalent. It is not the intention of the Owner or Architect to eliminate from consideration

products that are equivalent in quality, appearance, and function to those specified.

- B. In the specifications, two or more kinds, types, brands, or manufacturers or materials may be named. They shall be regarded as the required standard of quality, and overall, are judged to be equivalent by the Architect. The Bidder may select one of these named items as the basis for its Bid. If a Bidder proposes to use comparable products/equivalents other than those listed in the Project Manual, submit in accordance with subparagraph C below.
- C. No substitution will be considered prior to receipt of Bids unless written request for approval on a Substitution Request (During the Bidding Phase) Form (Section 004325) has been received by the Architect at least ten (10) days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed equivalent would require, shall be included. The burden of proof of the merit of the proposed equivalent is upon the proposer. The Architect's decision of approval or disapproval of a proposed equivalent shall be final.
- D. If the Architect approves a proposed equivalent prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
- E. No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

3.4 ADDENDA

- A. Addenda will be transmitted to all that are known to have received a complete set of Bidding Documents. All such addenda shall become part of the Contract Documents and all Bidders shall be bound by such Addenda whether or not received by the Bidders.
 - 1. Provide Bidding Document distributor with full company name, address, telephone and facsimile numbers and contact person's name.
- B. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

- C. Addenda will not be issued later than five (5) working days prior to the time specified for receipt of Bids, except any Addendum withdrawing the request for Bids or one which includes postponement of the time for receipt of Bids.
- D. Each Bidder shall ascertain upon submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt on the Bid Form.

3.5 TAX LIABILITY

- A. Bidders are exempt from payment of manufacturer's excise taxes for materials purchased for the exclusive use of the Owner, provided that the manufacturer has complied with rules and regulation of the Commissioner of Internal Revenue Service.
- B. New York State Sales Tax does not apply to this Project. Contractors are exempt from payment on purchase of materials for the execution of this Contract and such taxes shall not be included in Bids. Exemption Certificates will be provided upon request.
- C. All other taxes shall be included in the Bid.

3.6 PRE-BID CONFERENCE

- A. There will be a Pre-Bid Conference as detailed in the Invitation to Bidders. A lack of representation at the Pre-bid Conference will not be justification for additional costs due to unforeseen conditions during the construction phases of the Contracts.

PART 4 – BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- A. Bids shall be submitted on forms identical to the Bid Forms contained in this Project Manual, or submitted using unaltered and legible copies thereof.
- B. All blanks on the Bid Form shall be legible executed in a non-erasable medium. No Bid will be considered which does not include bids for all items listed in the proposal sheets.
- C. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
- D. Interlineations, alterations, and erasures must be initialed by the signer of the Bid.

- E. Bid all requested alternates. If no change in the Base Bid is required, enter "No Change."
- F. Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each Bid copy shall be signed by the person or persons legally authorized to bind the Bidder to a Contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.
- G. Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.
- H. The Owner may consider as informal any Bid on which there is an alteration of or departure from or additions to or qualification of the Bid Form or from the any of the other Contract Documents. The Owner may reject a Bid, which in the Owner's sole view, is not adequately filled out, or does not contain the requested information.

4.2 BID SECURITY

- A. Each Bid must be accompanied by a certified bank check of the Bidder, or a Bid Bond prepared by a surety company licensed in New York State.
 - 1. Bid Security shall be provided in the amount of five (5) percent of the dollar amount of the Base Bid.
 - 2. Bid Security shall be payable to Newburgh Enlarged City School District,.
 - 3. If certified check is utilized, the Bidder shall provide written confirmation from a licensed New York State Surety company that Performance and Payment Bonds will be available to said Bidder for this Project.
 - 4. The apparent low Bidders, upon failure or refusal to furnish the required Performance and Payment Bonds and execute a Contract within ten (10) calendar days after receipt of notice of the acceptance of Bid, shall forfeit the Bid Security as liquidated damages for such failure or refusal, and not as a penalty.
 - 5. The successful Bidders shall have the Bid Security returned upon execution of an Owner/Contractor Agreement.
 - 6. Unsuccessful Bidders shall have their Bid Security returned following the execution of the Owner/Contractor Agreements or the forty-five (45) day period following the Bid Opening, whichever occurs first.

7. The Bid Security shall not be forfeited to the Owner in the event the Owner fails to comply with subparagraph 6.2.
- B. Surety Bond shall be written on AIA Document A310, Bid Bond, and the attorney-in-fact that executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney and with a copy of the riders.
- C. The Owner will have the right to retain the Bid Security of Bidders to whom an award is being considered until either:
 1. The Contract has been executed and bonds, when required, have been furnished, or;
 2. The specified time has elapsed so that Bids may be withdrawn or;
 3. All Bids have been rejected.

4.3 SUBMISSION OF BIDS

- A. All copies of the Bid, the Bid Security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name, and address and, if applicable, the designated Contract for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
 1. If Bidder submits for different Contracts, each shall be submitted individually and so labeled for that Contract.
- B. Bids shall be deposited at the designated location prior to the time and date indicated in the Invitation to Bidders for the receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.
 1. The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.
 2. Oral, telephonic, telegraphic, facsimile, or other electronically transmitted Bids will not be considered.
- C. Bids not exhibiting original signatures or seals will not be accepted as a responsive Bid.
- D. Bids shall be submitted in duplicate. Executed forms required for each submitted Bid are as follows to be considered a complete bid:
 1. Bid Form- all costs are to be filled out
 2. Unit prices

3. Labor Rates
4. Substitution list
5. Resolution.
6. Non-Collusive Bid Certification.
7. Iran Divestment Act Certification.
8. Bid Security.

4.4 MODIFICATION OR WITHDRAWAL OF BID

- A. A Bid may not be modified, withdrawn, or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid. No Bidder may withdraw a Bid within the forty-five (45) day period following the time of the Bid Opening or be subject to forfeiture of the bid security.
- B. Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.
- C. Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
- D. Negligence on the part of the Bidder in preparing its Bid confers no right for the withdrawal of the Bid after it has been opened. If a Bidder claims to have made a mistake or error in its Bid, it shall deliver to the Architect within three (3) days after the Bid Opening, a written notice describing in detail the nature of the claimed mistake or error with documentary evidence or proof (including, but not limited to, bid worksheets, summary sheets and other bid related data requested of it). Failure to deliver notice and evidence or proof specified above within the specified time shall constitute a waiver of the Bidder's right to claim an error or mistake. Upon receipt of specified notice and evidence or proof within the specified time period, the Architect and Owner shall determine if an excusable error or mistake has been made; and, if so, the Owner may permit the Bid to be withdrawn. The Owner's determination of whether a Bidder made an excusable error or mistake shall be conclusive on the Bidder, its Surety, and all the claim rights under the Bidder.

PART 5 – CONSIDERATION OF BIDS

5.1 OPENING OF BIDS

- A. The properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders. The Owner reserves the right to postpone the date and time of the opening of Bids at any time prior to the date and time listed in the Advertisement or Invitation to Bid.

5.2 REJECTION OF BIDS

- A. The Owner shall maintain the right to reject any or all Bids. A Bid not accompanied by the required Bid Security or by other data required by the Bidding Documents, or which is in any way incomplete, or irregular is subject to rejection.
- B. If identical bids are received and these bids are or become the low Bids, the Owner reserves the right to award the Contract on the basis of the relative quality of the product or products as shown by similar work done elsewhere, and it is mutually agreed that the Owner's judgment shall be final.
- C. In order to qualify as a Contractor satisfactory to the Owner, each Bidder shall document to the satisfaction of the Owner that it has the skill and experience as well as the necessary facilities, ample financial resources, and adequate laborers and equipment to do the Work in a satisfactory manner and within the time specified. Bidders may be judged qualified only for the type of work in which they demonstrate competence. Bidders must prove to the satisfaction of the Owner that they are reputable, reliable, and responsible. The Owner may make any investigation it deems necessary to assure itself of the ability of the Bidder to perform the Work, and the Bidder shall furnish the Owner with all such additional information and data for this purpose as may be requested. In addition to the general reservation of rights to reject any and all bids, the Owner specifically reserves the right to reject any Bid of any Bidder 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 Documents and to complete the Work contemplated therein.
- D. The Owner reserves unto itself the sole right to determine the lowest qualified and responsible Bidder. The Owner may make any investigation necessary to determine the ability of the Bidder to fulfill the Contract and the Bidder shall furnish the Owner with all such information for this purpose as the Owner may request. Without limiting the general rights which the Owner has to reject Bids, as herein before set forth, in determining the lowest responsible Bidder, the

following considerations in addition to those above mentioned will be taken into account. In determining the responsibility of a Bidder for a public works contract, the Owner shall consider whether the Bidder:

1. Maintains a permanent place of business;
2. Has adequate plant and equipment to do the Work properly and expeditiously;
3. Has the suitable financial ability to meet obligations required by the Work;
4. Has appropriate technical ability and experience in institutional and commercial construction including experience in K-12 public school construction in New York State;
5. Has performed Work of the same general type and the same scale called for under this Contract;
6. Has previously failed to perform contracts properly or complete them on time;
7. Is in a position to perform this Contract;
8. Has habitually and without just cause neglected the payment of bills or otherwise disregarded its obligations to subcontractors, suppliers, or employees;
9. Is eligible for full bonding capacity of its Contract;
10. Has been in business as the corporation, partnership, sole proprietorship or other business entity, in whose name the bid is submitted, continuously, for no less than the previous five (5) years performing or coordinating the Work which they are bidding on;
11. Is not currently involved in bankruptcy proceedings;
12. Is licensed to perform the Work it is bidding on in the jurisdiction the work will take place;
13. Is able to perform the work with manpower available to it;
14. Will employ a field superintendent with at least five (5) years' experience as a working field superintendent and capable of communicating in fluent English;
15. Has committed a willful violation of the New York State Prevailing Wage Laws within the last five years;
16. Has committed violations of safety and/or training standards as evidenced by a pattern of OSHA violations or the existence of willful OSHA violations;
17. Has committed any significant violation of the Worker's Compensation Law, including, but not limited to, the failure of the bidder to provide proof of worker's compensation or disability benefits coverage;
18. Has committed any criminal conduct involving violations of the Environmental Conservation Law or other federal or state environmental statutes or regulations;
19. Has committed any criminal conduct concerning formation of, or any business association with, an allegedly false or fraudulent Women's or

Minority Business Enterprise (W/MBE), or any denial, decertification, revocation or forfeiture of W/MBE status by New York State;

20. Has been debarred by any agency of the U.S. Government; and
21. Has engaged in other conduct of so serious or compelling a nature that it raises questions about the responsibility of the bidder, including, but not limited to submission to the Owner of a false or misleading Statement of Bidder's Qualifications, or in some other form, in connection with a bid for or award of a contract.

5.3 AWARD OF BID

- A. It is the intent of the Owner to enter into separate Prime Contracts with the lowest responsive and responsible bidder, as those criteria are defined and interpreted under the laws of the State of New York regarding competitive bidding for public improvement projects, for each Prime Contract, provided the Bids are submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interest.
- B. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.
- C. The acceptance of a Bid will be a notice in writing signed by a duly authorized representative of the Owner by mail sent within forty-five (45) after the Bids have been opened and no other act of the Owner shall constitute the acceptance of a Bid. The acceptance of a Bid shall bind the successful Bidder to execute the Contract as provided hereinafter. The rights and obligations provided for in the Contract shall become effective and binding upon the parties only with its formal execution by the successful Bidder and the Owner.

PART 6 – POST-BID INFORMATION

6.1 CONTRACTOR'S QUALIFICATION STATEMENT

- A. Bidders to whom an award of a Contract is under consideration shall submit to the Owner, within three (3) calendar days, a properly executed AIA Document A305, Contractor's Qualification Statement, unless such statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

- B. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform its obligations under the Contract, and the Bidder shall furnish the Owner all such information and data for this purpose as the Owner may request. The right is reserved by the Owner to reject any Bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified and capable to carry out properly the terms of the Contract. The issuing of Bid Documents and acceptance of a Bidder's payment by the Owner shall not be construed as pre-qualification of that Bidder. If a Bidder is later discovered to have misrepresented or provided false or incorrect information with regard to any material party of the information submitted to the Owner, including but not limited to information regarding experience, debarment, claims, lawsuits, arbitrations, mediations, finances, license, contract termination, the Owner reserves the right to reject the Bid of such Bidder and, if a Contract has been awarded, it will become automatically voidable at the sole discretion and election of the Owner.

6.2 SUBMITTALS

- A. Within three (3) calendar days following the Bid Opening time, the apparent lowest Bidder, shall furnish to the Owner through the Architect the following information:
 - 1. Contractor's Qualification Statement – AIA Document 305, 2020 edition.
 - 2. Labor rate sheet
 - 3. Material and Equipment List.
 - 4. Schedule of Values.
 - 5. Proposed Project Manager.
- B. The Bidder will be required to establish to the satisfaction of the Owner and Construction Manager the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
- C. Upon request only, the apparent second and third low Bidders shall be prepared to submit the information of paragraphs 6.1 and 6.2.A.
- D. Prior to the execution of the Contract, the Construction Manager will notify the Bidder in writing if either the Owner, Architect/Engineer, or Construction Manager, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner, Architect or Construction Manager has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity. In the event of withdrawal or disqualification, Bid Security will not be forfeited.

- E. Persons and entities proposed by the Bidder and to whom the Owner and Construction Manager have made no reasonable objection must be used on the Work for whom they were proposed and shall not be changed except with the written consent of the Owner and Construction Manager.
- F. Any Bidder, upon failure to submit the information required in subparagraphs 6.1.A, 6.2.A, and 6.2.B in the allowed time, may have the Bid rejected. In that event, the Bidder shall forfeit the Bid Security to the Owner as liquidated damages for such failure or refusal, and not as penalty.

6.3 BOND REQUIREMENTS

- A. The Owner requires the apparent successful Bidder to furnish and deliver bonds, covering the faithful performance of the Contract Work and payment of all obligations arising thereunder duly executed by the Bidder and a surety company licensed to do business in New York State rating.
- B. The premiums shall be included in the Bid and paid by the Contractor. The Bidder shall proportionally distribute the costs of such bonds between the Base Bid and any Alternates.

6.4 TIME OF DELIVERY AND FORM OF BONDS

- A. The Bidder shall deliver the required bonds to the Owner through the Construction Manager on or before the time of execution of the Owner/Contractor Agreement. Bonds shall be payable to Newburgh Enlarged City School District.
- B. Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond, Version 2010. Both bonds shall be written in the amount of the Contract Sum.
- C. The bonds shall be dated the same as the Owner/Contractor Agreement.
- D. The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.
- E. The surety for the performance and payments bonds shall be a duly authorized surety company, licensed to do business in the State of New York, and listed in the latest issue of U.S. Treasury Circular 570. The sufficiency of the surety and the bonds is subject to the approval of the Owner, and sureties and bonds that are deemed insufficient by the Owner may be rejected.

PART 7 – AGREEMENT FORM BETWEEN OWNER AND CONTRACTOR

- A. Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition – AIA Document A132-2019 Edition, as modified.

END OF DOCUMENT 002113

SECTION 003100 - AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.1 EXISTING CONDITIONS

- A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of the Bidders' own investigations. These documents made available for Bidders' convenience and information, but are not a warranty of existing conditions and will not be part of Contract Documents, as follows:
- B. Geotechnical Reports: dated August 27, 2022 and January 6, 2021, see two Reports following this Section.
 - 1. Electronic copy is available for inspection and will be provided per request.
 - 2. This report identifies properties of below grade conditions and offers recommendations for the design of foundations, prepared primarily for the use of Architect.
 - 3. The recommendations described shall not be construed as a requirement of this Contract, unless specifically referenced in Contract Documents.
 - 4. This report, by its nature, cannot reveal all conditions that exist on the site. Should subsurface conditions be found to vary substantially from this report, changes in the design and construction of foundations will be made, with resulting credits or expenditures to the Contract Price accruing to Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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Quality Geo Engineering, P.C.

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**GEOTECHNICAL ENGINEERING REPORT
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
CAREER AND TECHNICAL EDUCATION BUILDING
WEST STREET
NEWBURGH, NEW YORK**

PREPARED FOR:

CPL
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Newburgh, New York 12550

PREPARED BY:

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877 Route 4S
Schuylerville, New York 12871
on behalf of QC/QA Laboratories, Inc.



**August 27, 2022
Project No. SE22-021**

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FIGURES

FIGURE No. 1 – SITE LOCATION MAP

FIGURE No. 2 – SUBSURFACE EXPLORATION LOCATION PLAN

APPENDICES

APPENDIX A – SUBSURFACE EXPLORATION LOGS

APPENDIX B – FILL MATERIAL AND PLACEMENT RECOMMENDATIONS

APPENDIX C – INFORMATION REGARDING THIS GEOTECHNICAL
ENGINEERING REPORT

1.0 INTRODUCTION

This report presents the results of a subsurface exploration program and geotechnical engineering evaluation completed by Quality Geo Engineering, P.C. on behalf of QC/QA Laboratories, Inc., for the proposed Newburgh Enlarged City School District Career and Technology Education building planned on West Street in Newburgh, New York. The subsurface exploration was completed by QC/QA Laboratories, Inc. (QCQA Labs), and the geotechnical engineering evaluation was performed by Quality Geo Engineering, P.C., on behalf of QCQA Labs.

Based on the information provided by CPL, we understand the project will include constructing a new building with associated asphalt pavement parking and drive areas, site retaining walls, and stormwater management areas. QCQA Labs previously performed a subsurface exploration for this project and provided a geotechnical report, dated January 6, 2021. The purpose of the current subsurface exploration and geotechnical evaluation was for design of the stormwater infiltration field and site retaining walls.

The site is located on the east side of West Street in the City of Newburgh, New York. The approximate location of the project site is shown on the attached Figure No. 1. There is a relatively steep slope along the east side of the site with existing grades sloping downward from west to east on the order of approximately 60 feet.

2.0 SUBSURFACE EXPLORATION

The subsurface exploration program consisted of five (5) test borings drilled in proposed site retaining wall areas, six (6) test borings drilled in the infiltration field area and six (6) infiltration tests. The test borings were drilled by QCQA Labs on July 21st and 22nd, 2022. The test borings located in the vicinity of the proposed retaining walls were designed as B-1 through B-5. The test borings located in the stormwater infiltration field were designated as IT-1 through IF-6. The approximate locations of the test borings are shown on the attached Figure No. 2. The infiltration tests were performed at the corresponding test boring locations.

Test borings B-3 and B-5 were terminated with auger refusal at depths of 4.4 and 4.0 feet, respectively. Test boring B-4 was terminated with sample spoon refusal at a depth of 14.4 feet. Test borings B-1 and B-2 were advanced to the planned termination depth of 16.0 feet. Test borings IT-1 through IT-6 were each advanced to a depth of 8 feet.

The test borings were made with a Central Mine Equipment model CME 550X drill rig using hollow stem auger drilling techniques. Split spoon samples and Standard Penetration Tests (SPTs) were taken in the test borings continuously to a depth of up to 10 feet, and at 5 foot intervals or less thereafter. The split spoon sampling and SPTs were completed in general accordance with *ASTM D 1586 - "Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils"*.

The test boring logs were prepared by a geotechnical engineer based on visual observation of the recovered soil samples and review of the driller's field notes. The soil samples were described based on a visual/manual estimation of the grain size distribution, along with characteristics such as color, relative density, consistency, moisture, etc. The test boring logs are presented in Appendix A, along with general information and a key of terms and symbols used to prepare the logs.

3.0 SUBSURFACE CONDITIONS

3.1 Soil Profile

3.1.1 Retaining Wall Test Borings B-1 Through B-5

An upper layer of existing fill type materials was encountered in test borings B-1, B-2, and B-4. The upper fill type materials consisted of brown to gray sand with varying amounts of intermixed gravel, silt, organics, and/or wood fragments; and brown gravel with varying amounts of intermixed sand, silt, organics, and/or asphalt fragments. The existing fill type soils encountered in test borings B-1, B-2, and B-4 extended to a depth of approximately 6 feet.

Indigenous overburden soils were encountered at the ground surface in test borings B-3 and B-5, and beneath the upper layer of existing fill type soils in the remaining test borings. The indigenous soils consisted of brown silt with intermixed sand and gravel; brown sand with varying amounts of intermixed gravel and silt; and brown gravel with varying amounts of intermixed sand and silt.

Standard penetration test (SPT) "N" values obtained within the cohesionless existing fill type materials encountered in the test borings ranged from 9 to 39 indicating the relative density of these materials varied from "loose" to "compact". SPT "N" values obtained in the cohesionless indigenous soils encountered in the test borings ranged from 9 to greater than 100 indicating the relative density of these soils varied from "loose" to "very compact". We point out that some of the SPT "N" values may be artificially high where the split spoon sampler encountered large gravel particles, cobbles, boulders, or possible bedrock.

3.1.2 Infiltration Field Test Borings IT-1 through IT-6

An upper layer of existing fill type materials was encountered in test borings IT-2 and IT-3. The upper fill type materials consisted of brown sand with intermixed gravel and trace amounts of plastic; brown gravel with intermixed sand and silt; and brown to gray silt with intermixed sand, gravel, and/or organics. The existing fill type soils encountered in test borings IT-2 and IT-3 extended to depths of approximately 4 and 6 feet, respectively.

Indigenous overburden soils were encountered beneath the upper layer of existing fill type soils in test borings IT-2 and IT-3, and at the ground surface in the remaining test borings. The indigenous soils consisted of brown to brown-gray silt with varying amounts of intermixed sand and gravel; brown, gray, and brown-gray sand with varying amounts of intermixed gravel and silt; brown to brown-gray gravel with varying amounts of intermixed sand and silt.

Standard penetration test (SPT) “N” values obtained within the cohesionless existing fill type materials encountered in the test borings ranged from 7 to 31 indicating the relative density of these materials varied from “loose” to “compact”. SPT “N” values obtained in the cohesionless indigenous soils encountered in the test borings ranged from 10 to greater than 100 indicating the relative density of these soils varied from “firm” to “very compact”. We point out that some of the SPT “N” values may be artificially high where the split spoon sampler encountered large gravel particles or cobbles.

3.2 Auger Refusal

Auger refusal was encountered in test borings B-3 and B-5 at depths of 4.4 and 4.0 feet, respectively. We anticipate that auger refusal at these locations was likely the result of encountering the top of bedrock. Rock fragments were recovered in the split-spoon sampler beginning at a depth of approximately 2 feet in test boring B-5 indicating that bedrock was likely encountered. Rock coring was not performed to verify the nature of the refusal material encountered in the test borings.

The bedrock underlying the site is mapped as Wappinger Group, Copake Formation, Rochdale Formation, Halcyon Lake Dolostone, Briarcliff Dolostone, Pine Plains Formation, and Stissing Formation based on the *Geologic Map of New York*, Hudson-Mohawk Sheet, Map and Chart Series No. 15.

3.3 Groundwater Conditions

Free standing water was not encountered in the test borings at the time of drilling. We point out that some of the soil samples recovered from test borings B-1, IT-2, IT-3, and IT-4 were described as “wet” beginning at depths of 14, 6, 6, and 4 feet, respectively, indicating that perched or trapped groundwater conditions may have been present. It is possible that some isolated areas of perched or trapped groundwater conditions could be encountered in the near surface soils in some areas following periods of wet weather. It should be expected that groundwater conditions could vary with changes in soil conditions, precipitation, and seasonal conditions.

4.0 INFILTRATION TESTING

A total of six (6) infiltration tests were performed at the site. The infiltration tests were designated as IT-1 through IT-6 and were conducted at a depth of 4.0 feet. The holes

were pre-soaked in advance of testing. Infiltration testing was performed in general accordance with the New York State Department of Environmental Conservation “*Stormwater Management Design Manual*”, Appendix D criteria. The infiltration test results are presented in the following table.

Infiltration Test Results					
Infiltration Test No.	Test Depth (feet)	Trial No.	Water Drop (inches)	Elapsed Time (hours)	Infiltration Rate (inches/hour)
IT-1	4	1	1	1	1
		2	1	1	1
		3	1	1	1
		4	1	1	1
IT-2	4	1	0	1	0
		2	0	1	0
		3	0	1	0
		4	0	1	0
IT-3	4	1	0	1	0
		2	1	1	1
		3	1	1	1
		4	1	1	1
IT-4	4	1	12	1	12
		2	10	1	10
		3	8.5	1	8.5
		4	9	1	9
IT-5	4	1	0.5	1	0.5
		2	0.5	1	0.5
		3	0.5	1	0.5
		4	0.5	1	0.5
IT-6	4	1	0	1	0
		2	0	1	0
		3	0	1	0
		4	0	1	0

5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 Site Retaining Walls

We anticipate the site retaining walls will consist of modular block gravity systems, mechanically stabilized earth systems, or cast-in-place concrete systems. We recommend the site retaining walls be located no closer than 5 feet from the top of the slope along the east side of the site where the slope angle is steeper than 3H:1V.

Existing fill type soils were encountered in test borings B-1, B-2, and B-4 extending to a depth of approximately 6 feet. We recommend that existing fill type soils be removed from beneath the retaining wall foundations. Excavations to removed existing fill type soils should extend horizontally on each side a distance equal to the depth of undercut beneath the proposed bottom of foundation elevation. The resulting undercut excavation should be backfilled with Structural Fill. Recommendations for Structural Fill material, along with placement and compaction requirements, are presented in Appendix B.

For modular block and/or mechanically stabilized retaining wall systems, we recommend the base row of blocks be directly underlain by a nominal 6-inch thick layer of Drainage Stone. Recommendations for Drainage Stone material are presented in Appendix B. Drainage Stone should be wrapped in a non-woven geotextile separation fabric, such as Mirafi 140N or equivalent.

We recommend the bottom row of modular block retaining wall systems be embedded at least 2 feet below existing grade. We point out that the recommended 2-foot embedment depth will not protect the walls from frost heave. We recommend modular block retaining walls be designed using an allowable soil bearing pressure of 1,400 psf. The allowable soil bearing pressure is based on a factor of safety of at least 3.0.

We recommend spread footings for cast-in-place retaining walls be embedded at least 5 feet below finished grade for frost protection. Spread footings for cast-in-place concrete retaining walls can be designed using a maximum allowable soil bearing pressure of 4,000 psf.

Site retaining walls should be designed to resist lateral earth pressures caused by the load of backfill against the walls and the surcharge effects from permanent or temporary loads. Walls that are restrained against lateral movement should be designed using “at-rest” lateral earth pressures. Walls that are allowed to yield can be designed using “active” lateral earth pressures. The walls should be backfilled with Structural Fill, as described in Appendix B.

The lateral earth pressures can be computed using the following soil parameters where the backfill behind the walls is relatively level:

Recommended Lateral Earth Pressure Parameters:

Soil Angle of Internal Friction – 34 degrees (Structural Fill)

Coefficient of Sliding Friction – 0.40 (CIP concrete over Native Soil)

Coefficient of Sliding Friction – 0.50 (Precast concrete over Drainage Stone)

Coefficient of At-Rest Lateral Earth Pressure – 0.44

Coefficient of Active Lateral Earth Pressure – 0.28

Coefficient of Passive Lateral Earth Pressure – 3.54

Total Moist Unit Weight of Soil – 125 pcf

5.2 Retaining Wall Drainage System

Site retaining walls should be constructed with foundation drainage systems to intercept groundwater and relieve potential hydrostatic pressures from acting on the walls. The drainage system should consist of footing under drain pipes and clean crushed stone placed against the back side of the walls.

The footing under drain pipes should consist of 4-inch diameter, slotted or perforated PVC pipes, which are placed at the bottom of the Drainage Stone layer beneath the bottom row of blocks. The Drainage Stone layer must be wrapped in a non-woven geotextile separation fabric, such as Mirafi 140N or equivalent. The under drain pipe should include clean-outs to allow periodic flushing and maintenance of the system. The under drain pipe should discharge to a suitable downslope outlet.

We recommend Drainage Stone be placed directly behind the retaining walls and extending 1 foot beyond the blocks. The remaining area beyond the Drainage Stone should be backfilled with Structural Fill. The Drainage Stone should be separated from the Structural Fill with a non-woven geotextile separation fabric. Recommendations for Drainage Stone and Structural Fill materials are presented in Appendix B.

6.0 CONCLUDING REMARKS

This report was prepared to assist in planning the design and construction of the proposed Newburgh Enlarged City School District Career and Technology Education building planned on West Street in Newburgh, New York. This report has been prepared for specific application to this site and this project only.

The recommendations were prepared based on our understanding of the proposed project, as described herein, and through the application of generally accepted soils and foundation engineering practices. No warranties, expressed or implied, are made by the conclusions, opinions, recommendations, or services provided.

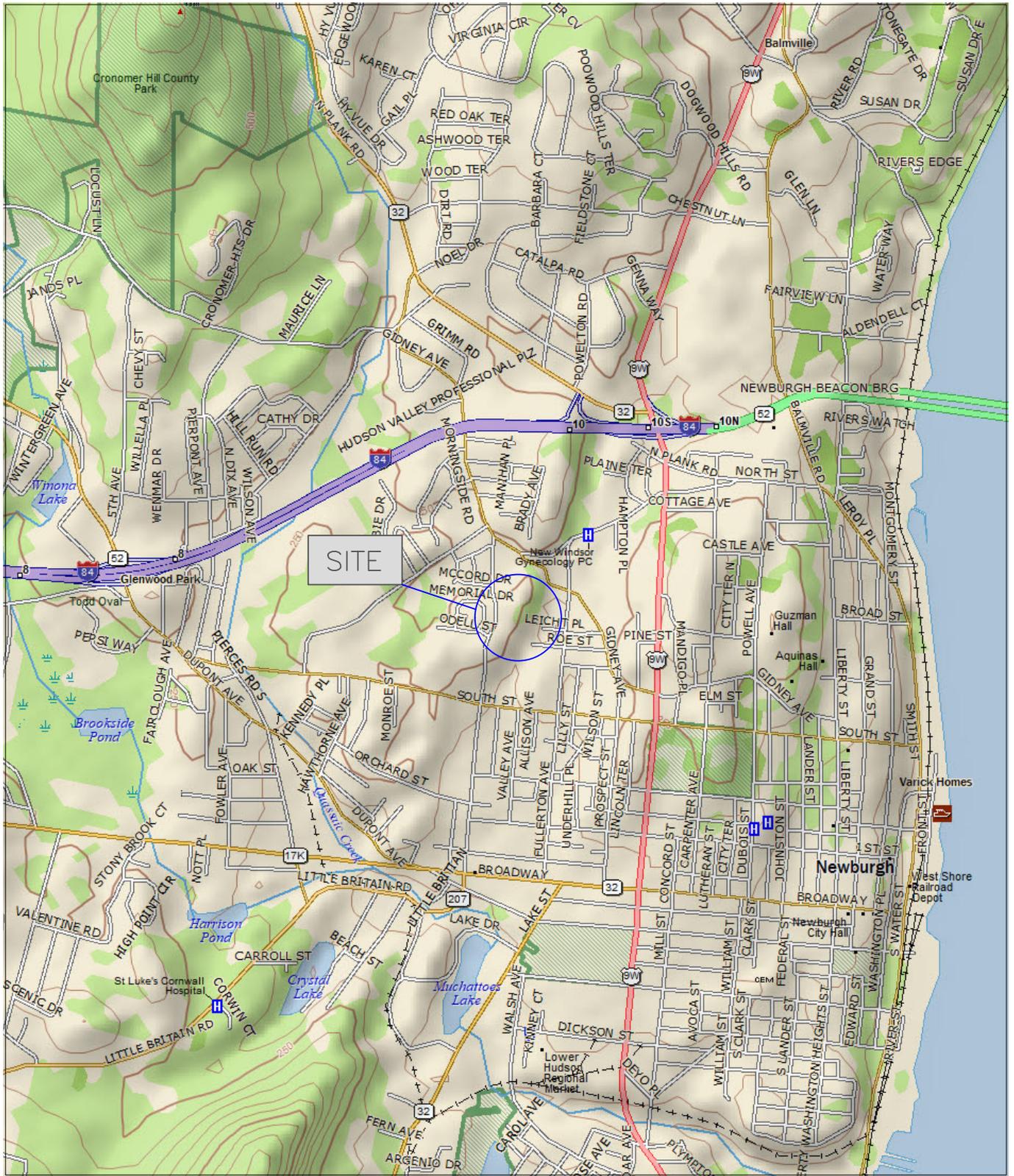
Important information regarding the use and interpretation of this report is presented in Appendix C.

Respectfully Submitted:
Quality Geo Engineering, P.C.

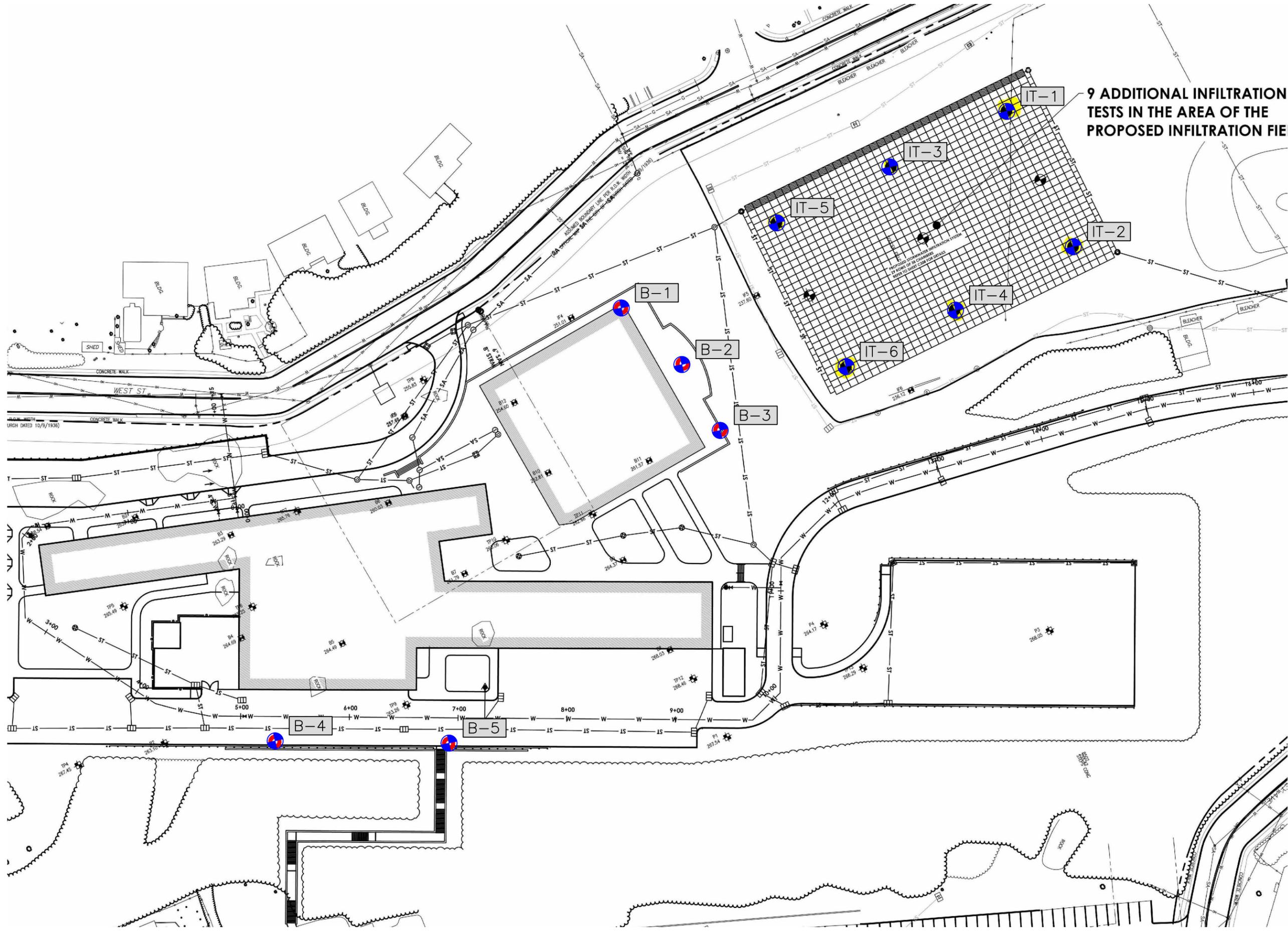


Tod M. Kobik, P.E.
President

FIGURES



QUALITY GEO ENGINEERING, P.C. 877 ROUTE 4 S SCHUYLERVILLE, NEW YORK 12871 PHONE (518) 372-4067 FAX (518) 507-6113	SCALE: N.T.S.	SITE LOCATION MAP NEWBURGH ECSD CAREER & TECHNICAL EDUCATION CENTER WEST STREET NEWBURGH, NEW YORK
	DRAWN BY: TMK	
	DATE: 8/27/22	
	PROJECT No.: SE22-021	
	FIGURE No.: 1	



9 ADDITIONAL INFILTRATION TESTS IN THE AREA OF THE PROPOSED INFILTRATION FIE

NOTE: TEST BORING LOCATIONS ARE APPROXIMATE.

QUALITY GEO ENGINEERING, P.C.
 877 ROUTE 4S
 SCHUYLERVILLE, NEW YORK
 PHONE (518) 372-4067
 FAX (518) 507-6113

SUBSURFACE EXPLORATION
 LOCATION PLAN

NEWBURGH ECSD
 CTE BUILDING
 WEST STREET
 NEWBURGH, NEW YORK

SCALE: N.T.S.
DRAWN BY: TMK
DATE: 8/27/2022
PROJECT No.: SE22-021
FIGURE No.: 2

APPENDIX A
SUBSURFACE EXPLORATION LOGS

DATE
 START: 7/22/2022
 FINISH: 7/22/2022
 SHEET 1 OF 1



BORING NO. B-1
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
		1	9	12	20	19	32	0.8	FILL: Brown Compact GRAVEL, Some Fine-Medium Sand, Some Asphalt Fragments, Trace Silt, Dry	
		2	27	17	12	12	29	1.0	FILL: Brown Firm Fine-Coarse SAND, Some Gravel, Trace-Little Silt, Dry	
5		3	20	15	8	6	23	0.6	Similar	
		4	4	8	9	6	17	0.8	Brown Firm SILT, Some Fine-Medium Sand, Trace Gravel, Moist	
10		5	10	12	15	16	27	1.6	Brown Firm Fine-Medium SAND, Some Gravel, Trace-Little Silt, Moist	
15		6	4	4	5	10	9	1.5	Loose, Grades to "AND" SILT, "Little" Gravel, Wet	
									Boring terminated at a depth of 16.0 feet.	Free standing water was not present in bore hole upon completion of drilling.
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

CLASSIFICATION: Visual by
T. Kobik

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. B-2
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building LOCATION: West Street
Newburgh Free Academy Newburgh, New York

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
1	1	15	18	21	19	39	1.4	FILL: Brown Compact GRAVEL AND Fine-Coarse SAND, Little Silt, Dry	
2	2	21	10	4	3	14	1.6	Gray, Firm, Grades to "Trace" Organics	
3	3	9	3	16	27	19	1.0	FILL: Gray Firm Fine-Coarse SAND AND GRAVEL, Little Silt, Trace Organics, Moist	
4	4	17	46	25	23	71	0.5	Brown Very Compact GRAVEL AND Fine-Coarse SAND, Trace Silt, Dry	
5	5	8	12	14	12	26	1.0	Firm, Grades to "Fine-Medium" SAND	
6	6	6	12	11	12	23	1.1	Similar	
Boring terminated at a depth of 16.0 feet.								Free standing water was not present in bore hole upon completion of drilling.	

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X CLASSIFICATION: Visual by T. Kobik
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. B-3
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
	/	1	4	8	7	12	15	1.3	Brown Firm SILT, Some Fine Sand, Trace Gravel, Dry	
	/	2	10	11	14	6	25		Brown Firm Fine-Medium SAND AND GRAVEL, Trace Silt, Dry	
	/	3	100/0.4				REF	0.3		REF = Sample spoon refusal.
5									Boring terminated with auger refusal at a depth of 4.4 feet.	Free standing water was not present in bore hole upon completion of drilling.
10										The driller attempted a 2nd boring several feet from the initial location and encountered auger refusal at a depth of 4.0 feet.
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

CLASSIFICATION: Visual by
T. Kobik

DATE
 START: 7/22/2022
 FINISH: 7/22/2022
 SHEET 1 OF 1



BORING NO. B-4
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
0	1	3	4	5	5	9	1.4	FILL: Brown Loose Fine-Medium SAND, Some Gravel, Trace-Little Silt, Moist		
1	2	4	4	10	8	14	0.5	Firm, Grades to "Little" Wood Fragments		
2	3	8	10	5	5	15	0.7	Grades to "Some" Silt, "Trace" Organics, "No" Wood Fragments		
3	4	12	8	12	30	20	1.2	Brown Firm Fine-Medium SAND AND SILT, Little Gravel, Moist		
4	5	8	5	12	11	17	1.6	Similar		
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15	6	100/0.4				REF	NR	Boring terminated with sample spoon refusal at a depth of 14.4 feet.	Free standing water was not present in bore hole upon completion of drilling.	
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
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31										
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36										
37										
38										
39										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X CLASSIFICATION: Visual by
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers T. Kobik

DATE
 START: 7/22/2022
 FINISH: 7/22/2022
 SHEET 1 OF 1



BORING NO. B-5
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLES SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
0.7	1	16	8	12	9	20	0.7	Brown Firm GRAVEL AND Fine-Medium SAND, Trace Silt, Dry	
1.2	2	29	21	33	100/0.1	54	1.2	Light Gray Very Compact Rock Fragments, Dry	REF = Sample spoon refusal. NR = No recovery.
4.0	3	100/0				REF	NR	Boring terminated with auger refusal at a depth of 4.0 feet.	Free standing water was not present in bore hole upon completion of drilling.
5									
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

CLASSIFICATION: Visual by
T. Kobik

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. IT-1
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
0	1	3	9	19	20	28	1.6	Brown-Gray Firm SILT, Trace Fine Sand, Trace Gravel, Dry	
1	2	14	19	22	100/0.4	41	1.4	Brown Compact Fine-Coarse SAND, Little Gravel, Little Silt, Dry	
2	3	27	27	31	29	58	1.7	Very Compact, Grades to "Fine-Medium" SAND, "Some" Silt	
3	4	21	19	24	27	43	1.7	Compact, Grades to "AND" SILT, "Trace" Gravel	
4								Boring terminated at a depth of 8 feet.	Free standing water was not present in bore hole upon completion of drilling.
5									
6									
7									
8									
9									
10									
11									
12									
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35									
36									
37									
38									
39									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X CLASSIFICATION: Visual by
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers T. Kobik

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. IT-2
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
	/	1	5	5	12	6	17	1.4	FILL: Brown Firm Fine SAND AND SILT, Some Gravel, Trace Plastic, Dry	
	/	2	2	5	12	12	17	1.0	FILL: Gray Firm SILT, Little Fine Sand, Trace Gravel, Dry	
5	/	3	17	18	15	18	33	0.7	Brown-Gray Compact GRAVEL AND Fine-Coarse SAND, Trace Silt, Dry	
	/	4	15	11	8	12	19	1.0	Brown Firm Fine SAND, Trace-Little Silt, Wet	
									Boring terminated at a depth of 8 feet.	Free standing water was not present in bore hole upon completion of drilling.
10										
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

CLASSIFICATION: Visual by
T. Kobik

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. IT-4
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
	/	1	3	18	24	26	42	1.3	Brown Compact GRAVEL AND Fine-Medium SAND, Trace-Little Silt, Dry	
	/	2	20	16	18	19	34	1.0	Brown Compact Fine-Medium SAND AND GRAVEL, Trace-Little Silt, Dry	
5	/	3	18	21	20	24	41	1.6	Grades to "AND" SILT, "Trace" Gravel, Wet	
	/	4	17	21	25	23	46	1.8	Grades to "Some" Gravel	
									Boring terminated at a depth of 8 feet.	Free standing water was not present in bore hole upon completion of drilling.
10										
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

CLASSIFICATION: Visual by
T. Kobik

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. IT-5
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building LOCATION: West Street
Newburgh Free Academy Newburgh, New York

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
	/	1	2	6	9	9	15	1.6	Brown Firm SILT, Some Fine-Medium Sand, Trace Gravel, Dry	
	/	2	6	4	6	8	10	1.4	Brown-Gray, Grades to "Little" Fine Sand	
5	/	3	4	8	12	22	20	1.8	Gray Firm Fine-Medium SAND AND SILT, Little Gravel, Dry	
	/	4	25	18	19	14	37	1.6	Compact, Grades to "Little" Silt, "Some" Gravel	
									Boring terminated at a depth of 8 feet.	Free standing water was not present in bore hole upon completion of drilling.
10										
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X CLASSIFICATION: Visual by
T. Kobik
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 7/21/2022
 FINISH: 7/21/2022
 SHEET 1 OF 1



BORING NO. IT-6
 PROJ. NO. SE22-021
 SURF. ELEV. G.S.
 G.W. DEPTH See Notes

PROJECT: Proposed CTE Building
Newburgh Free Academy

LOCATION: West Street
Newburgh, New York

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
1	1	5	5	6	7	11	1.0	Brown Firm Fine-Medium SAND AND SILT, Some Gravel, Dry	
2	2	7	10	16	21	26	1.3	Similar	
3	3	12	14	11	12	25	1.0	Gray, Grades to "Trace" Silt	
4	4	12	18	27	22	45	1.0	Brown-Gray, Compact, Grades to "AND" SILT, Cobble	
8								Boring terminated at a depth of 8 feet.	Free standing water was not present in bore hole upon completion of drilling.
10									
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									
36									
38									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: CME 550X CLASSIFICATION: Visual by
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers T. Kobik

EXAMPLE KEY TO SUBSURFACE EXPLORATION LOGS

DATE START: <u>XX/XX/XX</u> FINISH: <u>XX/XX/XX</u> SHEET <u>X</u> OF <u>X</u>	 <p style="font-size: small;">QC/QA LABORATORIES, INC. GEOTECHNICAL ENGINEERING SERVICES</p>	PROJ. NO. <u>XX-XXXX</u> HOLE NO. <u>X-X</u> SURF. ELEV. <u>XXX.X'</u> G.W. DEPTH <u>X.X'</u>
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PROJECT: <u>PROJECT NAME</u>	LOCATION: <u>PROJECT LOCATION</u>
<u>PROJECT NAME</u>	<u>PROJECT LOCATION</u>

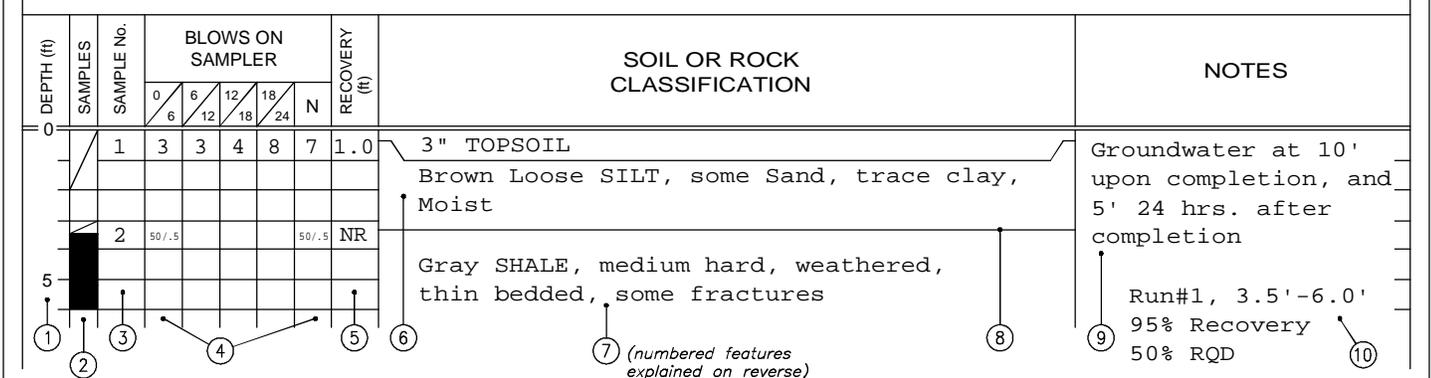


TABLE I

	Split Spoon Sample
	Shelby Tube Sample
	Geoprobe Macro-Core
	Auger or Test Pit Sample
	Rock Core

TABLE II

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on basis of plasticity.

Soil Type	Soil Particle Size	
Boulder	>12"	Coarse Grained (Granular)
Cobble	3" - 12"	
Gravel - Coarse	3" - 3/4"	
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	
- Medium	#10 - #40	Fine Grained
- Fine	#40 - #200	
Silt - Non Plastic (Granular)	<#200	
Clay - Plastic (Cohesive)		

TABLE III

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.

Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE IV

The relative compactness or consistency is described in accordance with the following terms:

Granular Soils		Cohesive Soils	
Term	Blows per Foot, N	Term	Blows per Foot, N
Very Loose	0 - 4	Very Soft	0 - 2
Loose	4 - 10	Soft	2 - 4
Firm	10 - 30	Medium	4 - 8
Compact	30 - 50	Stiff	8 - 15
Very Compact	>50	Very Stiff	15 - 30
		Hard	>30

(Large particles in the soils will often significantly influence the blows per foot recorded during the penetration test)

TABLE V

Varved	Horizontal uniform layers or seams of soil(s).
Layer	Soil deposit more than 6" thick.
Seam	Soil deposit less than 6" thick.
Parting	Soil deposit less than 1/8" thick.
Laminated	Irregular, horizontal and angled seams and partings of soil(s).

TABLE VI

Rock Classification Term	Meaning	Rock Classification Term	Meaning
Hardness	- Soft	Bedding	- Laminated (<1")
	- Medium Hard		- Thin Bedded (1" - 4")
	- Hard		- Bedded (4" - 12")
	- Very Hard		- Thick Bedded (12" - 36")
	- Massive (>36")		
Weathering	- Very Weathered	(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers)	
	- Weathered		
	- Sound		

Scatched by fingernail
 Scatched easily by penknife
 Scatched with difficulty by penknife
 Cannot be scatched by penknife
 Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the general observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a small fraction of the soils at the site and may not be representative of subsurface conditions between and/or away from the boring locations or between the sampled intervals. The data presented on the Subsurface Logs along with the recovered samples provide a basis for estimating the engineering characteristics of the soils at the site. The evaluation must consider all the recorded details and their relative significance to the project. It is common that evaluation of standard subsurface data indicates the need for additional testing and/or sampling to more accurately evaluate the subsurface conditions. Any evaluation of the data presented on the Subsurface Logs must be performed by qualified professionals. The following information defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered. The paragraph numbers below correspond to the numbered features identified on the opposite page.

1. The figures in the Depth column define the scale of the Subsurface Log.
2. The Samples column shows a graphical representation of the depth and type of sampling performed. See Table I for descriptions of the symbols used to represent the various types of samples.
3. The Sample No. is used for identification on sample containers and laboratory test reports.
4. Blows on Sampler - shows the results of the "Standard Penetration Test" (SPT), recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required to drive the sampler for each six inch increment is recorded. The first six inches of penetration is considered a seating drive. The sum of the number of blows required for the second and third six inch increments is termed the penetration resistance, N. The outside diameter of the sampler, hammer weight and length of drop are noted at the bottom of the Subsurface Log.
5. Recovery - Shows the length of the recovered sample.
6. All recovered soil samples are reviewed in the laboratory by an engineering technician or geotechnical engineer, unless noted otherwise. Visual descriptions are made on the basis of a combination of the driller's field descriptions and noted observations together with the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D 2487) with regard to the particle size and plasticity (See Table No. II), and the Unified Soil Classification group symbols for the soil types are sometimes included with the soil classification. Additionally, the relative portion, by weight, of two or more granular soil types is described in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister, ASTM Special Technical Publication 479, June 1970, (See Table No. III). Description of the relative soil density or consistency is based upon the penetration records as defined in Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet or saturated. Water introduced into the boring either naturally or during drilling may have affected the moisture condition of the recovered samples. Special terms are used as required to describe soil deposition in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon sampler, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the sampler blows or through the action of the drill rig as reported by the driller.
7. Rock descriptions are based on review of the recovered rock core samples and the driller's notes. Typical rock classification terms are included in Table VI.
8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines delineate apparent changes in soil type, based upon review of recovered soil samples and the driller's notes. Dashed lines indicate a lesser degree of certainty with respect to either a change in soil type or where such a change may occur.
9. Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to understand that the reliability of the water observations depends upon the soil type (water level does not readily stabilize in a bore hole through fine grained soils), and that any drill water used to advance the boring may have influenced the observations. Typically, the ground water level will fluctuate with seasonal changes in precipitation patterns. One or more perched or trapped water levels may exist in the ground seasonally. Generally, it is prudent to install a groundwater observation well to better define water levels.
10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run length. The Rock Quality Designation (RQD) is the total length of pieces of recovered core exceeding 4 inches divided by the core run length. The size of the core barrel used is also noted.

APPENDIX B

**FILL MATERIAL AND
PLACEMENT RECOMMENDATIONS**

FILL MATERIAL AND PLACEMENT RECOMMENDATIONS

I. Fill Material Recommendations

A. Subbase Stone

Subbase Stone should consist of a crusher run stone meeting the material and gradation requirements of New York State Department of Transportation (NYSDOT), Standard Specifications, Item 304.12 – Type 2 Subbase Course. Subbase Stone for pavement construction should consist of Item 304.12 – Type 2 or Item 304.14 – Type 4 Subbase Course.

B. Structural Fill

Structural Fill should consist of an imported well graded crusher run stone or bank-run sand and gravel, which is free of clay, expansive shale, organics and friable or deleterious particles. Imported Structural Fill should also conform to the following gradation requirements:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
3 inch	100
¼ inch	25-65
No. 40	5-40
No. 200	0-10

C. Drainage Stone

Drainage Stone should consist of a blend of crusher run stone or crushed gravel meeting the material and gradation requirements of ASTM C33 size 57 Coarse Aggregate as follows:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
1-1/2 inch	100
1 inch	95-100
1/2 inch	25-60
No. 40	0-10
No. 8	0-5

Drainage Stone should be wrapped in a non-woven geotextile fabric, such as Mirafi 140 N, or equivalent.

D. General Fill

General Fill may be used for backfill in non-loaded areas outside of foundation, structure, slab-on-grade and paved areas. General Fill may consist of on-site or imported soils, which are free of topsoil, organics, pyritic materials, debris and deleterious materials and are of a moisture content suitable for proper compaction.

II. Fill Placement and Compaction Recommendations

All controlled fill placed beneath foundations, structures, utilities, slab-on-grade and pavement areas should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor test (ASTM D1557), or as directed by the geotechnical engineer. Fill placed in non-loaded grass areas can be compacted to a minimum of 90 percent of the maximum dry density (ASTM D1557). Drainage Stone should be compacted with several passes of a steel drum roller or plate tamper (compaction testing is not required for Drainage Stone).

Placement of Structural Fill and Subbase Stone should not exceed a maximum loose lift thickness of 9 inches and should be reduced in conjunction with the compaction equipment used so that the required density is attained. Drainage Stone can be placed in maximum 24 inch thick loose lifts.

Fill should have a moisture content within 2 percent of the optimum moisture content prior to compaction. Subgrades should be properly drained and protected from moisture and frost. Placement of fill on frozen subgrades is not acceptable. It is recommended that all fill placement and compaction be monitored and tested by qualified geotechnical personnel.

III. Quality Assurance Testing

The following minimum laboratory and field quality assurance testing frequencies are recommended to confirm fill material quality and post placement and compaction conditions. These minimum frequencies are based on generally uniform material properties and placement conditions. Should material properties vary or conditions at the time of placement vary (i.e. moisture content, placement and compaction, procedures or equipment, etc.), then additional testing is recommended. Additional testing, if required, should be determined by qualified geotechnical personnel based on evaluation of the actual fill material and construction conditions.

A. Laboratory Testing of Material Properties

- Moisture content (ASTM D-2216) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Grain Size Analysis (ASTM D-422) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Modified Proctor Moisture Density Relationship (ASTM D-1557) 1 test per 4000 cubic yards or no less than 1 test per each material type.

B. Field In-Place Moisture/Density Testing (ASTM D-6938)

- Backfilling along trenches and foundation walls - 1 test per 50 lineal feet per lift.
- Backfilling Isolated Excavations (i.e. column foundations) 1 test per lift.
- Filling in open areas for slab-on-grade and pavement construction - 1 test per 2500 square feet per lift.

APPENDIX C

**INFORMATION REGARDING THIS
GEOTECHNICAL ENGINEERING REPORT**

IMPORTANT INFORMATION REGARDING THIS GEOTECHNICAL ENGINEERING REPORT

Quality Geo Engineering, P.C. (Quality Geo), has endeavored to prepare this report in accordance with generally accepted geotechnical engineering principles and practices on behalf of QC/QA Laboratories, Inc. (QCQA Labs). Geotechnical engineering analyses and evaluations are based partly on judgment and opinion, and are therefore far less exact than other engineering disciplines. Accordingly, Quality Geo believes that providing the report user with information regarding the preparation and limitations of this report will aid in the proper interpretation and implementation of the conclusions and recommendations presented in this report. The following information is provided in an effort to reduce potential geotechnical-related delays, cost over-runs and other problems that can develop during the design and construction process.

SCOPE OF SERVICES: The scope of this report is limited to the specific items identified in QCQA Labs' Proposal for services for this project. The scope of services is limited to a geotechnical engineering evaluation of the conditions disclosed by the subsurface exploration and does not include any geoenvironmental assessment or investigation for the presence, absence or prevention of any hazardous or toxic materials or conditions (or mold) in the soil, groundwater or surface water within or beyond the project site. Unanticipated environmental problems can lead to significant project cost over-runs and QCQA Labs recommends that the Owner retain a geoenvironmental consultant to discuss risk management guidance.

PROJECT-SPECIFIC FACTORS: The conclusions and recommendations presented in this report were prepared based on project-specific factors described in the report, such as the size, loading, type of construction and intended use of the structure; the location of the structure on the site; planned structure elevation(s) and site grading; other planned or existing site improvements, such as access roads, parking lots, underground utilities; and any other pertinent project information. Changes to the project details may alter the factors considered in development of the report conclusions and recommendations. As such, neither Quality Geo nor QCQA Labs shall be responsible nor liable for problems that may develop if we are not consulted regarding any changes to the project-specific factors that were assumed during preparation of the report.

SUBSURFACE CONDITIONS: The subsurface exploration program for this project consisted of sampling only at discrete test locations. Quality Geo has used judgment to infer the subsurface conditions between the discrete test locations. The conclusions and recommendations presented in this report were based on the subsurface conditions disclosed/inferred at and between the discrete test locations at the time the subsurface exploration program was performed. We point out that surface and subsurface conditions at the site are subject to change subsequent to preparation of this report. Such changes may include floods, earthquakes, groundwater fluctuations, and construction activities at the site and/or adjoining properties. It should be understood that the actual subsurface conditions could vary from the conditions inferred by Quality Geo between and away from the discrete test locations, which could be revealed during construction. As such, QCQA Labs should be retained during construction to confirm that the subsurface conditions are consistent with the conditions disclosed by the subsurface exploration program, and to refine our conclusions and recommendations in the event that the subsurface conditions differ from those disclosed by the subsurface exploration program.

USE OF THIS GEOTECHNICAL ENGINEERING REPORT: This report has been prepared for the exclusive use of our client, and any other parties specifically identified in the report, for specific application to the site and project-specific conditions described in the report. This report should not be applied to any other site or project, or for any uses other than those originally intended without our consent.

MISINTERPRETATION OF THIS REPORT: The conclusions and recommendations presented in this report are subject to misinterpretation by the design team and contractors, which can result in costly problems. The risk of misinterpretation by the design team can be reduced by having appropriate members of the design team confer with QCQA Labs regarding the conclusions and recommendations presented in this report prior to completing the plans and specifications. In addition, QCQA Labs should be retained to review pertinent elements of the design team's final plans and specifications prior to bidding to confirm that the recommendations presented in this report have been properly interpreted and applied. The risk of misinterpretation by contractors can be reduced by retaining QCQA Labs to attend prebid and preconstruction conferences, and to provide construction observation.

COMPONENTS OF THIS REPORT: Subsurface exploration logs, figures, tables and any other report components are subject to misinterpretation if they are separated from this report. This may occur if copies of the boring logs or other report components are given to the contractors during the bid preparation process. To minimize this risk, report components should not be separated from the report and only complete copies of this report should be distributed as appropriate.

ALTERATION OF THIS REPORT: It is a violation of Section 7209 Subdivision 2 of the New York State Education Law for any person to alter this report in any way, except under the direction of a licensed professional engineer. Neither QCQA Labs nor Quality Geo shall be liable for any alterations that are made to this report without our knowledge and written consent.

Quality Geo Engineering, P.C.

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**GEOTECHNICAL ENGINEERING REPORT
NEWBURGH ENLARGED CITY SCHOOL DISTRICT
CAREER AND TECHNICAL EDUCATION BUILDING
WEST STREET
NEWBURGH, NEW YORK**

PREPARED FOR:

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PREPARED BY:

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on behalf of QC/QA Laboratories, Inc.



**January 6, 2021
Project No. SE20-042**

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FIGURES

FIGURE No. 1 – SITE LOCATION MAP

FIGURE No. 2 – SUBSURFACE EXPLORATION LOCATION PLAN

APPENDICES

APPENDIX A – SUBSURFACE EXPLORATION LOGS

APPENDIX B – FILL MATERIAL AND PLACEMENT RECOMMENDATIONS

APPENDIX C – INFORMATION REGARDING THIS GEOTECHNICAL
ENGINEERING REPORT

1.0 INTRODUCTION

This report presents the results of a subsurface exploration program and geotechnical engineering evaluation completed by Quality Geo Engineering, P.C. on behalf of QC/QA Laboratories, Inc., for the proposed Newburgh Enlarged City School District Career and Technology Education building planned on West Street in Newburgh, New York. The subsurface exploration was completed by QC/QA Laboratories, Inc. (QCQA Labs), and the geotechnical engineering evaluation was performed by Quality Geo Engineering, P.C., on behalf of QCQA Labs.

Based on the information provided by CPL, we understand the project will include constructing a new building with associated asphalt pavement parking and drive areas, site retaining walls, and stormwater management areas. Based on the preliminary site plan provided by CPL, we understand the proposed new building is planned to have a finished floor elevation of El. 267 feet and the proposed parking lot areas are planned to have finished grades on the order of approximately El. 264 to 265 feet. We anticipate the proposed site retaining walls will consist of modular block gravity or mechanically stabilized earth style walls.

The project site includes two (2) existing wood framed buildings, which are planned to be demolished. The majority of the site is wooded and undeveloped, however, there is evidence that some portions of the site have been used for dumping fill, leaves, and other debris.

The site is located on the east side of West Street in the City of Newburgh, New York. The approximate location of the project site is shown on the attached Figure No. 1. There is a relatively steep slope along the east side of the site with existing grades sloping downward from west to east on the order of approximately 60 feet.

2.0 SUBSURFACE EXPLORATION

The subsurface exploration program consisted of a total of twenty (20) test borings and thirteen (13) test pits. The test pits were excavated by QCQA Labs on December 2, 2020 and the test borings were drilled by QCQA Labs on December 3rd, 4th, 7th, and 8th, 2020. Twelve (12) test borings were located in the vicinity of the proposed building and were designed as B-1 through B-12. Four (4) test borings were located in proposed pavement areas and were designated as P-1 through P-4. Four (4) test borings were located at stormwater infiltration test areas and were designated as IF-1 through IF-4. The test pits were located in proposed building and pavement areas and were designated as TP-1 through TP-13. The approximate locations of the test borings and test pits are shown on the attached Figure No. 2.

Test pits TP-5, TP-9, and TP-10 through TP-12 were excavated to depths ranging from 9 to 12 feet. The remaining test pits encountered refusal on bedrock at depths ranging from 2 to 9 feet. Test borings B-1 through B-12 were terminated with auger refusal at depths

ranging from approximately 3 to 24 feet. Test boring P-2 was terminated in overburden soils at a depth of 10 feet. Test borings P-1, P-3, and P-4 encountered auger refusal at depths ranging from 2.5 to 6 feet. Rock coring was advanced 5 feet into bedrock in test boring P-4. Test boring IF-4 was terminated in overburden soils at a depth of 8 feet. Test borings IF-1 through IF-3 were terminated with auger refusal at depths ranging from 4 to 5.6 feet.

The test pits were excavated using a 9-ton Yanmar mini-excavator. The test borings were made using a Diedrich model D-50 drill rig mounted on a Morooka rubber track all-terrain carrier. The test borings were advanced using hollow stem auger drilling techniques. Split spoon samples and Standard Penetration Tests (SPTs) were taken in the test borings continuously to a depth of up to 10 feet, and at 5 foot intervals thereafter. The split spoon sampling and SPTs were completed in general accordance with *ASTM D 1586 - "Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils"*.

The test pit and test boring logs were prepared by a geotechnical specialist based on visual observation of the recovered soil samples and review of the driller's field notes. The soil samples were described based on a visual/manual estimation of the grain size distribution, along with characteristics such as color, relative density, consistency, moisture, etc. The rock core was described based on visual identification of the rock type, along with characteristics such as hardness, bedding planes, fracturing, core recovery and rock quality designation (RQD) value. The test pit and test boring logs are presented in Appendix A, along with general information and a key of terms and symbols used to prepare the logs.

3.0 SUBSURFACE CONDITIONS

3.1 Soil Profile

A surficial layer of topsoil was generally present throughout the site, with the exception of areas where previous grading/filling had apparently occurred. The thickness of the topsoil layer was measured in the test pits ranging from approximately 4 to 7 inches.

An upper layer of existing fill type materials was encountered in test borings B-6, B-7, B-10, B-11, and P-1, and in test pits TP-2, TP-4, TP-5, TP-6, TP-10, and TP-11. The upper fill type materials consisted of brown, dark brown, gray, and gray-brown sand with varying amounts of intermixed gravel, silt, brick fragments, concrete, glass, organics, and/or cobbles/boulders; gray crusher run stone; gray gravel with varying amounts of intermixed sand, silt, clay, organics, asphalt, and/or cobbles; brown-black ash and cinders with zones containing intermixed glass; and wood mulch.

The thickness of the upper existing fill type materials ranged from approximately 3 inches to between 10 and 15 feet below existing grade. The thickness of the existing fill type materials encountered in the test borings and test pits are summarized in the table below.

Test Boring/Test Pit No.	Ground Surface Elevation* (ft.)	Depth of Existing Fill Type Materials (ft.)	Bottom Elevation of Existing Fill Type Materials (ft.)
B-1	268.5	NA	NA
B-2	263.4	NA	NA
B-3	263.3	NA	NA
B-4	264.7	NA	NA
B-5	264.5	NA	NA
B-6	260.0	6	254.0
B-7	261.8	15	246.8
B-8	268.0	NA	NA
B-9	264.4	NA	NA
B-10	262.8	15	247.8
B-11	261.6	4	257.6
B-12	254.6	NA	NA
P-1	267.5	NA	NA
P-2	263.1	8	255.1
P-3	268.1	NA	NA
P-4	264.2	NA	NA
IF-1	270.3	NA	NA
IF-2	269.0	NA	NA
IF-3	257.4	NA	NA
IF-4	236.1	NA	NA
TP-1	270.2	NA	NA
TP-2	267.5	0.25	267.3
TP-3	269.7	NA	NA
TP-4	267.5	2	265.5
TP-5	265.5	3.5	262.0
TP-6	265.3	5	260.3
TP-7	265.8	NA	NA
TP-8	255.8	NA	NA
TP-9	263.3	NA	NA
TP-10	263.1	10	253.1
TP-11	262.7	2.5	260.2
TP-12	268.5	NA	NA
TP-13	266.3	NA	NA

*Existing ground surface elevations were provided by CPL and were rounded to the nearest 0.1 foot.

Indigenous overburden soils were encountered beneath the topsoil and/or existing fill type soils in test borings and test pits. The indigenous soils consisted of brown to dark

brown sand with varying amounts of intermixed silt, gravel, rock fragments, organics, and/or cobbles/boulders; brown to brown-black silt with varying amounts of intermixed sand, gravel, clay, organics, and/or cobbles/boulders; and brown to gray gravel with varying amounts of intermixed sand, silt, rock fragments, and/or cobbles.

Standard penetration test (SPT) “N” values obtained within the cohesionless existing fill type materials encountered in the test borings ranged from 3 to greater than 100 indicating the relative density of these materials varied from “very loose” to “very compact”. SPT “N” values obtained in the cohesionless indigenous soils encountered in the test borings ranged from “weight of hammer” to greater than 100 indicating the relative density of these soils varied from “very loose” to “very compact”. We point out that some of the SPT “N” values may be artificially high where the split spoon sampler encountered large gravel particles, cobbles, or boulders.

3.2 Bedrock

The top of weathered bedrock was encountered in test pits TP-1 through TP-4, TP-6, TP-7, TP-8, and TP-13 at depths ranging from approximately 1.5 to 9 feet. Weathered rock fragments were recovered from test borings B-1, B-3, B-6, B-11, IF-2, and IF-3 beginning at depths ranging from 4 to 15 feet. Auger refusal (apparent top of bedrock) was encountered in each test boring, with the exception of test borings P-2 and IF-4, at depths ranging from 2.5 to 24.0 feet. We anticipate that the top of bedrock was encountered at the auger refusal depths. Rock coring was advanced 5.0 feet into bedrock after reaching auger refusal in test boring P-4. The bedrock depths and elevations encountered in the test pits, along with the auger refusal (apparent top of bedrock) depths and elevations encountered in the test borings are summarized in the table below.

Test Boring No.	Ground Surface Elevation* (feet)	Depth to Auger Refusal / Apparent Top of Bedrock (feet)	Elevation to Auger Refusal / Apparent Top of Bedrock (feet)
B-1	268.5	7.0	261.5
B-2	263.4	20.0	243.4
B-3	263.3	8.0	255.3
B-4	264.7	13.0	251.7
B-5	264.5	6.0	258.5
B-6	260.0	15.1	244.9
B-7	261.8	22.0	239.8
B-8	268.0	12.0	256.0
B-9	264.4	16.5	247.9
B-10	262.8	24.0	238.8
B-11	261.6	6.5	255.1
B-12	254.6	3.0	251.6
P-1	267.5	6.0	261.5

P-2	263.1	NA	NA
P-3	268.1	4.0	264.1
P-4	264.2	2.5	261.7
IF-1	270.3	4.0	266.3
IF-2	269.0	4.3	264.7
IF-3	257.4	5.6	251.8
IF-4	236.1	NA	NA
TP-1	270.2	5.0	265.2
TP-2	267.5	6.0	261.5
TP-3	269.7	1.5	268.2
TP-4	267.5	3.5	264.0
TP-5	265.5	NA	NA
TP-6	265.3	9.0	256.3
TP-7	265.8	7.0	258.8
TP-8	255.8	5.0	250.8
TP-9	263.3	NA	NA
TP-10	263.1	NA	NA
TP-11	262.7	NA	NA
TP-12	268.5	NA	NA
TP-13	266.3	2.0	264.3

*Existing ground surface elevations were provided by CPL and were rounded to the nearest 0.1 foot.

The bedrock underlying the site is mapped as Wappinger Group, Copake Formation, Rochdale Formation, Halcyon Lake Dolostone, Briarcliff Dolostone, Pine Plains Formation, and Stissing Formation based on the *Geologic Map of New York*, Hudson-Mohawk Sheet, Map and Chart Series No. 15.

Rock coring was advanced from a depth of 2.5 to 7.5 feet in test boring P-4. The recovered rock core was described as gray medium hard, slightly weathered and moderately fractured Limestone. The core recovery value was 82 percent and the RQD value was 34 percent indicating a “poor” rock mass quality.

3.3 Groundwater Conditions

Free standing water was not encountered in the test borings at the time of drilling. We point out that some of the soil samples recovered from test borings B-9, P-4, and IF-4 were described as “wet” beginning at depths of 8, 2, and 2 feet, respectively, indicating that perched or trapped groundwater conditions may have been present. It is possible that some isolated areas of perched or trapped groundwater conditions could be encountered in the near surface soils in some areas following periods of wet weather. It should be expected that groundwater conditions could vary with changes in soil conditions, precipitation, and seasonal conditions.

4.0 INFILTRATION TESTING

A total of four (4) infiltration tests were performed at the site. The infiltration tests were designated as IF-1 through IF-4 and were conducted at a depth of 4.0 feet. The holes were pre-soaked in advance of testing. Infiltration testing was performed in general accordance with the New York State Department of Environmental Conservation “*Stormwater Management Design Manual*”, Appendix D criteria. The infiltration test results are presented in the following table.

Infiltration Test Results					
Infiltration Test No.	Test Depth (feet)	Trial No.	Water Drop (inches)	Elapsed Time (hours)	Infiltration Rate (inches/hour)
IF-1	4	1	7	1	7
		2	5	1	5
		3	5	1	5
		4	4	1	4
IF-2	4	1	7	1	7
		2	7	1	7
		3	6	1	6
		4	5	1	5
IF-3	4	1	12	1	12
		2	12	1	12
		3	13	1	13
		4	12	1	12
IT-4	4	1	0.0	1	0
		2			
		3			
		4			

5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 General

Based on the conditions encountered in the test borings and test pits, it is our opinion the primary geotechnical considerations impacting design and construction of the proposed project will be the presence of existing fill type materials and the relatively shallow depth of bedrock in some areas of the site. In our opinion, the proposed new building addition can be supported using conventional spread foundations with slab-on-grade construction, provided our recommendations are implemented.

We anticipate that existing fill type materials will be encountered throughout the proposed building footprint and pavement areas, particularly in the vicinity of test borings B-6, B-7, B-10, B-11, and P-1, and test pits TP-4, TP-5, TP-6, TP-10, and TP-11. The thickness of the existing fill type materials generally ranged from approximately 2 to 15 feet. The existing fill type materials included zones containing ash, cinders, brick, concrete, glass, wood mulch, and other organics. It is possible that existing fill type materials could be left in place beneath proposed pavement areas, provided the subgrades are firm and stable. We recommend all existing fill type materials be removed from within the proposed building footprint and extending horizontally a distance of at least 5 feet beyond the building footprint. We recommend all existing fill materials also be removed from beneath proposed site retaining wall foundations. The resulting excavations should be backfilled with Structural Fill. Recommendations for Structural Fill, along with placement and compaction requirements, are presented in Appendix B.

Based on the preliminary building finished floor elevation of El. 267 feet, it appears that bedrock will likely not be encountered in foundation excavations throughout the majority of the building footprint. However, it is possible that bedrock could be encountered in foundation excavations in some areas. It appears more likely that bedrock will be encountered in the cut excavation for the parking lot at the north end of the site.

If areas of bedrock are encountered in foundation excavations for the proposed new building, we anticipate that the upper foot or two of bedrock may be loosened using a large track-mounted excavator equipped with a hydraulic or pneumatic hammer. We recommend bedrock be removed to a depth of at least 6 inches below the bottom of the building footings. The resulting overexcavation below foundations should be backfilled with Drainage Stone. This will provide a cushion layer which will prevent point loads on the footings and will provide a more uniform bearing surface. Recommendations for Drainage Stone are presented in Appendix B.

It should be expected that blasting will likely be required to loosen the bedrock for general excavation at the north parking lot. Blasting should be performed by a licensed contractor. The blasting program should include pre-blast and post-blast condition surveys on all adjacent properties and utilities to document the condition of existing structures prior to and after completion of blasting operations. Blasting should be controlled to limit the maximum peak particle velocity (PPV) to less than one (1) inch per second (ips) at the nearest adjacent building and/or property limits. In addition, the peak airblast overpressure limit should be controlled to less than 0.014 pounds per square inch (psi) at the nearest building.

We point out that the controlled blasting guidelines described above are intended to prevent damage to existing structures and greatly exceed the threshold at which humans will notice vibration (approximately 0.02 ips). Accordingly, we recommend that blast vibrations be monitored and recorded during each blast event to confirm that the limits recommended above are not exceeded.

The preliminary site plan provided by CPL shows various site retaining walls including along the edge of the top of the slope on the east side of the of the pavement area on the east side of the proposed building and around the parking lot at the north end of the site. We recommend the retaining walls be located such that they are set back at least 5 feet from the edge of the slope, where the slope angle is steeper than 3H:1V, in order to maintain adequate bearing capacity and to prevent undermining of the retaining wall foundations.

It should be expected that isolated areas of perched or trapped groundwater conditions could be encountered in foundation and underground utility excavations. Temporary dewatering will be required to control groundwater conditions during construction. We anticipate that sump and pump methods of temporary dewatering would be adequate to control groundwater during construction and allow the work to proceed “in the dry”.

The overburden soils encountered in the test pits and test borings contained a significant fraction of intermixed silt and are not well suited for re-use as structural fill within the proposed building area or as backfill against foundation walls or site retaining walls. The fine-grained silt soils are sensitive to changes in moisture conditions and will soften and loose strength if they become wet and are exposed to construction activities. We recommend an imported Structural Fill material be used to raise existing site grades within building areas and as backfill against foundation walls and behind site retaining walls. Recommendations for Structural Fill material, along with placement and compaction requirements, are presented in Appendix B.

5.2 Site Preparation

Existing topsoil, trees, vegetation, and building foundations/slabs should be removed from within the proposed new building footprint and pavement areas. Existing fill type materials should be removed from within the proposed building footprint and extending horizontally a distance of 5 feet beyond the building footprint. Following the removal of topsoil, trees, vegetation, fill type materials, existing foundations/slab, and excavation to the design subgrade elevation, the exposed subgrades should be evaluated by a geotechnical engineer during construction. Exposed subgrades in proposed building and pavement areas should be proof rolled using a minimum 7-ton smooth drum roller or a loaded dump truck.

Any areas which appear wet, loose, soft, unstable, or otherwise unsuitable, should be undercut as directed by the geotechnical engineer. Undercut excavations beneath foundations, slab-on-grade and pavement areas should be backfilled with compacted Structural Fill. Recommendations for Structural Fill, along with placement and compaction requirements, are presented in Appendix B.

In our opinion, the existing on-site soils are not well suited for re-use as structural fill beneath building foundations and slab areas. The on-site soils generally contained a significant fraction of silt soils and will be sensitive to changes in moisture. We recommend that imported Structural Fill be used to raise existing grades within the

building areas and against foundation walls and against site retaining walls. Placement of all fill and/or backfill within the building and pavement areas should be observed and tested by qualified geotechnical personnel. Recommendations for fill material, placement, and compaction requirements are presented in Appendix B.

Finished grades surrounding the new building and pavement areas should be sloped to direct surface water away from the building, pavement areas, and retaining walls.

5.3 Spread Foundations

It is our opinion the proposed building can be supported using spread foundations. All existing fill type materials must be undercut and removed from beneath proposed foundation bearing grades as recommended in Sections 5.1 and 5.2 above. Spread foundations should bear on undisturbed indigenous soils or on Structural Fill which is placed and compacted in accordance with our recommendations. The exposed soil bearing grades should be observed and evaluated by a geotechnical engineer during construction.

It is possible that isolated areas of bedrock could be encountered in the foundation excavations in some areas. If areas of bedrock are encountered in foundation excavations for the proposed new building, we recommend the bedrock be removed using mechanical means (i.e. a large track-mounted excavator equipped with a hydraulic or pneumatic hammer). We recommend bedrock be removed to a depth of at least 6 inches below the bottom of the building footings. The resulting overexcavation below foundations should be backfilled with Drainage Stone. This will provide a cushion layer which will prevent point loads on the footings and will provide a more uniform bearing surface. Recommendations for Drainage Stone are presented in Appendix B.

All final bearing grades should be firm, stable, and free of loose soil, mud, water, frost, or other deleterious materials. Any soft or otherwise unsuitable soils identified by the geotechnical engineer should be undercut and replaced with Structural Fill or Subbase Stone as directed by the geotechnical engineer. Undercut excavations should extend out horizontally beyond the edge of the foundation a distance equal to the one-half of the depth of the undercut below the foundation. Recommendations for Structural Fill and Subbase Stone material, along with placement and compaction requirements are presented in Appendix B.

We recommend continuous wall foundations be at least 1.5 feet in width and isolated column foundations be at least 2.5 feet square. Interior foundations should be embedded at least 1.5 feet below the top of the interior floor slab in order to develop adequate bearing capacity. Exterior foundations must be embedded a minimum of 4.0 feet below finished exterior grades for frost protection.

Spread foundations, which are designed and constructed in accordance with our recommendations, can be sized using a maximum allowable soil bearing pressure of

3,000 pounds per square foot (psf). The allowable soil bearing pressure is based on a factor of safety of at least 3.0.

It is estimated that spread foundations, which are sized and properly constructed in accordance with our recommendations, will undergo total settlement of less than 3/4 inch, and differential settlements should be less than 1/2 inch.

5.4 Slab-on-Grade

The building at-grade floor slab can be constructed as slab-on-grade following proper site preparation as discussed in Sections 5.1 and 5.2 above. A minimum of 6 inches of Subbase Stone, as described in Appendix B, is recommended directly beneath the floor slab. The floor slab can be designed in accordance with procedures recommended by the Portland Cement Association or the American Concrete Institute, using a modulus of subgrade reaction of 200 pounds per cubic inch at the top of the Subbase Stone layer.

We recommend a vapor barrier be provided beneath interior floor slabs in areas receiving moisture-sensitive flooring in accordance with the American Concrete Institute (ACI) Guide for Concrete Floor and Slab Construction.

It should be understood that exterior slabs and sidewalks constructed upon the site's soils will heave as frost seasonally penetrates the subgrades. The magnitude of frost heave will vary with many factors resulting in differential movements that could result in tripping hazards. As the ground thaws, the heaved areas may settle back down unevenly, again creating potential tripping hazards. The magnitude of frost heave in sensitive areas, such as near doors and at sidewalk/pavement transitions, can be reduced by constructing the slabs over at least 18 inches of Drainage Stone. The Drainage Stone layer must have an underdrain within it to provide positive drainage to a suitable outlet. Although this may not eliminate all movement associated with frost heave, it should provide adequate protection against excessive differential frost heave during most winters. Recommendations for Drainage Stone material are presented in Appendix B.

5.5 Site Retaining Walls

We anticipate the site retaining walls will consist of modular block gravity or mechanically stabilized earth style systems. We recommend the site retaining walls be located no closer than 5 feet from the top of the slope along the east side of the site where the slope angle is steeper than 3H:1V. We recommend the base row of blocks be directly underlain by a nominal 6-inch thick layer of Drainage Stone. Recommendations for Drainage Stone material are presented in Appendix B. Drainage Stone should be wrapped in a non-woven geotextile separation fabric, such as Mirafi 140N or equivalent.

We recommend the bottom row of site retaining wall blocks be embedded at least 2 feet below existing grade. We recommend site retaining walls be designed using an allowable

soil bearing pressure of 1,400 psf. The allowable soil bearing pressure is based on a factor of safety of at least 3.0.

Site retaining walls should be designed to resist lateral earth pressures caused by the load of backfill against the walls and the surcharge effects from permanent or temporary loads. Walls that are restrained against lateral movement should be designed using “at-rest” lateral earth pressures. Walls that are allowed to yield can be designed using “active” lateral earth pressures. The walls should be backfilled with Structural Fill, as described in Appendix B.

The lateral earth pressures can be computed using the following soil parameters where the backfill behind the walls is relatively level:

Recommended Lateral Earth Pressure Parameters:

Soil Angle of Internal Friction – 34 degrees (Structural Fill)

Coefficient of Sliding Friction – 0.60 (CIP concrete over Drainage Stone)

Coefficient of Sliding Friction – 0.50 (Precast concrete over Drainage Stone)

Coefficient of At-Rest Lateral Earth Pressure – 0.44

Coefficient of Active Lateral Earth Pressure – 0.28

Coefficient of Passive Lateral Earth Pressure – 3.54

Total Moist Unit Weight of Soil – 125 pcf

5.6 Retaining Wall Drainage System

Site retaining walls should be constructed with foundation drainage systems to intercept groundwater and relieve potential hydrostatic pressures from acting on the walls. The drainage system should consist of footing under drain pipes and clean crushed stone placed against the back side of the walls.

The footing under drain pipes should consist of 4-inch diameter, slotted or perforated PVC pipes, which are placed at the bottom of the Drainage Stone layer beneath the bottom row of blocks. The Drainage Stone layer must be wrapped in a non-woven geotextile separation fabric, such as Mirafi 140N or equivalent. The under drain pipe should include clean-outs to allow periodic flushing and maintenance of the system. The under drain pipe should discharge to a suitable downslope outlet.

We recommend Drainage Stone be placed directly behind the retaining walls and extending 1 foot beyond the blocks. The remaining area beyond the Drainage Stone should be backfilled with Structural Fill. The Drainage Stone should be separated from the Structural Fill with a non-woven geotextile separation fabric. Recommendations for Drainage Stone and Structural Fill materials are presented in Appendix B.

5.7 Seismic Design Parameters

Based on the soil conditions encountered in the test borings, it is our opinion the site can be classified as **Seismic Site Class “C”** according to the 2020 Building Code of New York State criteria.

The mapped spectral accelerations in the project areas for Site Class “B” were based data obtained from the Applied Technology Council (ATC) web site (www.hazards.atcouncil.org) using latitude 41.5114 and longitude -74.0287 for the project site and ASCE7-16 data. The spectral response accelerations for Site Class “B” are as follows:

- Short Period Response (S_S) - 0.231g
- 1 Second Period Response (S_1) - 0.057g

For design purposes, the spectral response accelerations must be adjusted for site class “C” as follows:

- Short Period Response (S_{MS}) - 0.300g
- 1 Second Period Response (S_{M1}) - 0.085g

The corresponding five percent damped design spectral response accelerations (S_{DS} and S_{D1}) are as follows:

- S_{DS} - 0.200g
- S_{D1} - 0.057g

Based on the soil conditions encountered in the test pits and test borings, it is our opinion the soils underlying the site are not considered susceptible to soil liquefaction or lateral spreading as a result of the design seismic event. It is also our opinion that surface rupture is unlikely to occur at the site as a result of the design seismic event.

5.8 Pavement Section

Existing topsoil, trees, vegetation, foundations and slabs should be removed from within the proposed new pavement areas. It is possible that existing fill type soils may be left in place beneath proposed new pavement areas provided they are firm and stable. The exposed soil subgrade should be proofrolled and evaluated by a geotechnical engineer during construction. The proofrolling should be performed using a minimum 7-ton smooth drum roller, or a loaded dump truck.

Any areas which appear wet, loose, soft, unstable, or otherwise unsuitable, should be undercut as directed by the geotechnical engineer. Undercut excavations should be backfilled with Structural Fill or Subbase Stone. Recommendations for Structural Fill and

Subbase Stone material, along with placement and compaction requirements, are presented in Appendix B.

Proper drainage of the pavement section is required to maximize the pavement longevity. The soil subgrade materials encountered in the test borings included zones of relatively low permeability soils, which will tend to trap and hold surface water as it infiltrates into the ground. We recommend underdrains be incorporated into the pavement section to prevent groundwater from infiltrating into the pavement section Subbase Stone layer. The underdrains should consist of 4-inch diameter perforated plastic pipe surrounded by Drainage Stone, which is wrapped in non-woven geotextile separation fabric. The underdrains should be established approximately 12 inches below the bottom of the Subbase Stone layer and should discharge to a suitable outlet. We recommend underdrains be installed along pavement edges. The soil subgrades should be sloped to direct groundwater to the underdrains.

We recommend materials for the above pavement structure components consist of the following:

- A. Asphalt Concrete Top Course - NYSDOT Standard Specifications, 9.5 F3 Top Course (or Type 6 or Type 7 Top Course).
- B. Asphalt Concrete Binder Course - NYSDOT Standard Specifications, 25 F9 Binder Course (or Type 3 Binder Course).
- C. Asphalt Concrete Base Course – NYSDOT Standard Specifications, 37.5 F9 Base Course (or Type 1 Base Course).
- D. Subbase Stone – Should comply with NYSDOT Standard Specifications, 304.12 Type 2 or 304.14 Type 4 Subbase.
- E. Drainage Stone – Should comply with NYSDOT Standard Specifications, Section 703-02 Material Designation 703-0201 or 703-0202, Size Designation No. 1 washed gravel or stone.
- F. Non-Woven Geotextile Separation Fabric – Non-Woven polypropylene separation geotextile (i.e. Mirafi 140N or approved equivalent).
- G. Woven Geotextile Stabilization Fabric - Woven polypropylene stabilization geotextile (i.e., Mirafi 500X or approved equivalent).

Adjacent geotextile panels should have an overlap of at least 18 inches. Construction of the asphaltic concrete courses (i.e., base, binder and top) should be performed in accordance with NYSDOT Standard Specifications Section 400. The base, binder and top courses should be compacted to at least 92 percent of the maximum theoretical density.

The pavement sections recommended below are based on the assumption that the subgrades and pavement sections will be prepared and constructed in accordance with our recommendations.

Parking Areas

- 1.5 inches – Top Course
- 2.5 inches – Binder Course
- 8.0 inches – Subbase Course
- Woven geotextile stabilization fabric

Main Drive & Bus Loop

- 1.5 inches – Top Course
- 2.5 inches – Binder Course
- 3.0 inches – Base Course
- 12.0 inches – Subbase Course
- Woven geotextile stabilization fabric

6.0 CONCLUDING REMARKS

This report was prepared to assist in planning the design and construction of the proposed Newburgh Enlarged City School District Career and Technology Education building planned on West Street in Newburgh, New York. This report has been prepared for specific application to this site and this project only.

The recommendations were prepared based on our understanding of the proposed project, as described herein, and through the application of generally accepted soils and foundation engineering practices. No warranties, expressed or implied, are made by the conclusions, opinions, recommendations, or services provided.

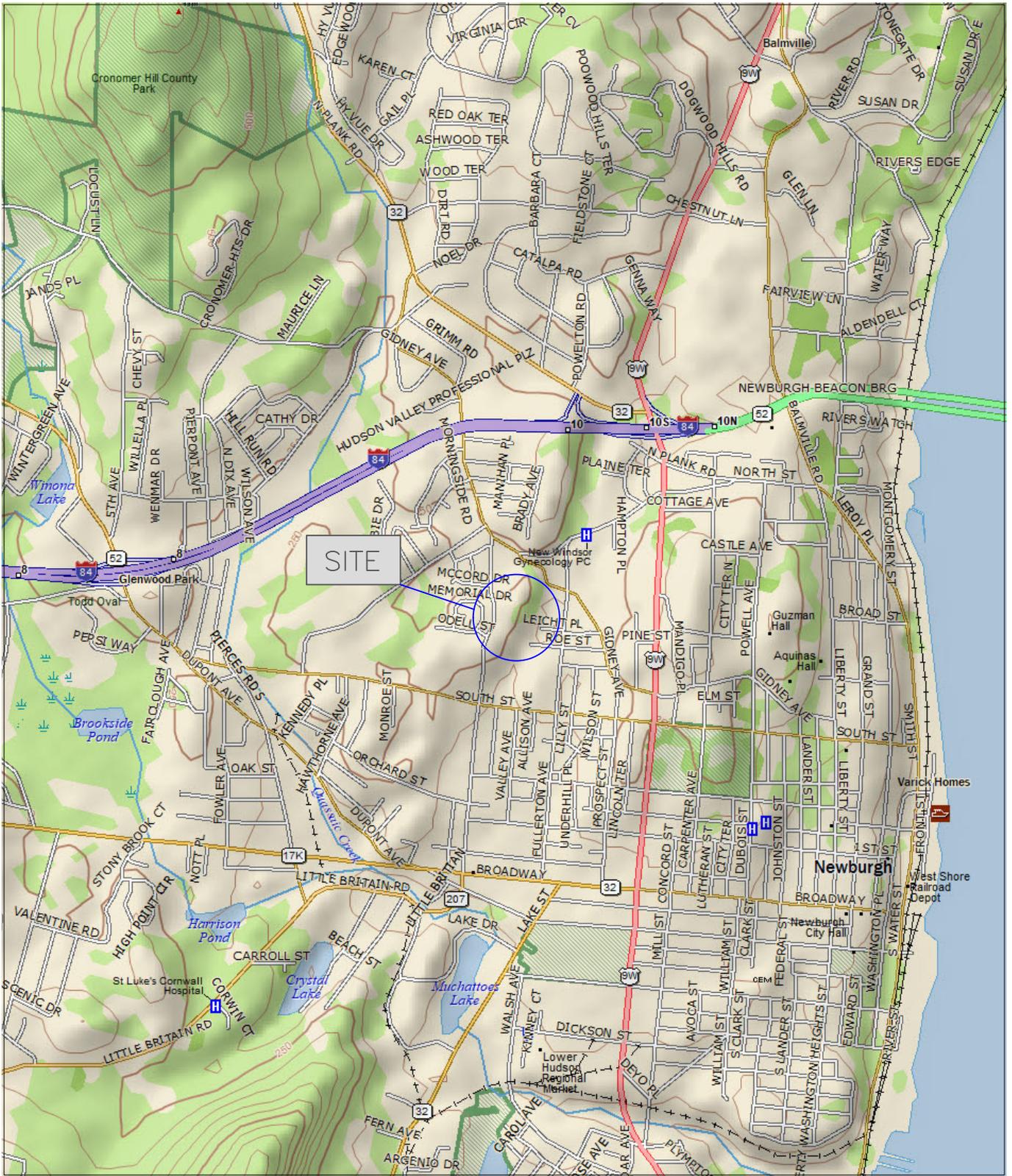
Important information regarding the use and interpretation of this report is presented in Appendix C.

Respectfully Submitted:
Quality Geo Engineering, P.C.

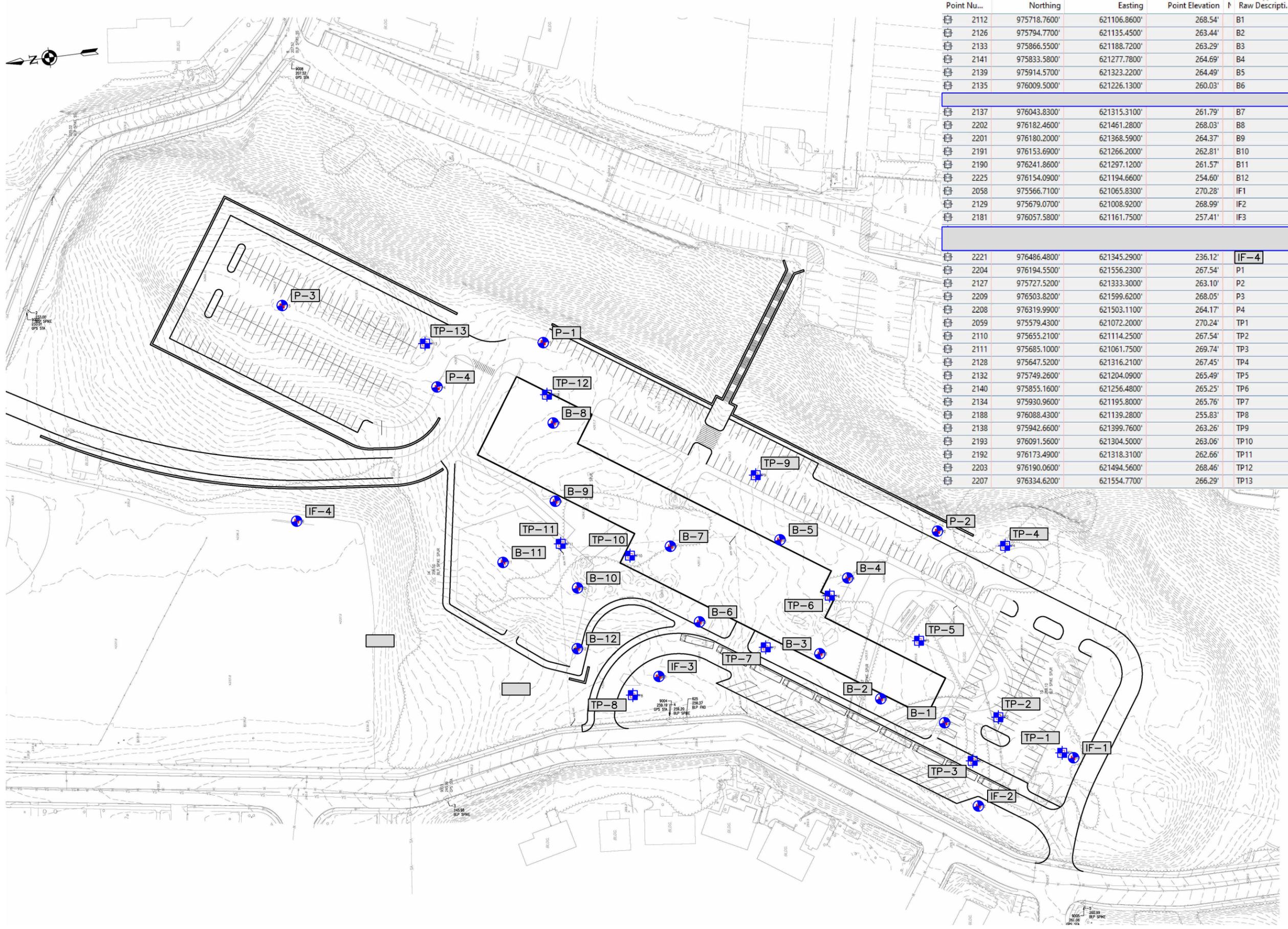


Tod M. Kobik, P.E.
President

FIGURES



QUALITY GEO ENGINEERING, P.C. 877 ROUTE 4 S SCHUYLerville, NEW YORK 12871 PHONE (518) 372-4067 FAX (518) 507-6113	SCALE: N.T.S.	SITE LOCATION MAP NEWBURGH ECSD CAREER & TECHNICAL EDUCATION CENTER WEST STREET NEWBURGH, NEW YORK
	DRAWN BY: <i>TMK</i>	
	DATE: 1/6/21	
	PROJECT No.: SE20-042	
	FIGURE No.: 1	



Point Nu...	Northing	Easting	Point Elevation	Raw Descripti...
2112	975718.7600'	621106.8600'	268.54'	B1
2126	975794.7700'	621135.4500'	263.44'	B2
2133	975866.5500'	621188.7200'	263.29'	B3
2141	975833.5800'	621277.7800'	264.69'	B4
2139	975914.5700'	621323.2200'	264.49'	B5
2135	976009.5000'	621226.1300'	260.03'	B6
2137	976043.8300'	621315.3100'	261.79'	B7
2202	976182.4600'	621461.2800'	268.03'	B8
2201	976180.2000'	621368.5900'	264.37'	B9
2191	976153.6900'	621266.2000'	262.81'	B10
2190	976241.8600'	621297.1200'	261.57'	B11
2225	976154.0900'	621194.6600'	254.60'	B12
2058	975566.7100'	621065.8300'	270.28'	IF1
2129	975679.0700'	621008.9200'	268.99'	IF2
2181	976057.5800'	621161.7500'	257.41'	IF3
2221	976486.4800'	621345.2900'	236.12'	IF-4
2204	976194.5500'	621556.2300'	267.54'	P1
2127	975727.5200'	621333.3000'	263.10'	P2
2209	976503.8200'	621599.6200'	268.05'	P3
2208	976319.9900'	621503.1100'	264.17'	P4
2059	975579.4300'	621072.2000'	270.24'	TP1
2110	975655.2100'	621114.2500'	267.54'	TP2
2111	975685.1000'	621061.7500'	269.74'	TP3
2128	975647.5200'	621316.2100'	267.45'	TP4
2132	975749.2600'	621204.0900'	265.49'	TP5
2140	975855.1600'	621256.4800'	265.25'	TP6
2134	975930.9600'	621195.8000'	265.76'	TP7
2188	976088.4300'	621139.2800'	255.83'	TP8
2138	975942.6600'	621399.7600'	263.26'	TP9
2193	976091.5600'	621304.5000'	263.06'	TP10
2192	976173.4900'	621318.3100'	262.66'	TP11
2203	976190.0600'	621494.5600'	268.46'	TP12
2207	976334.6200'	621554.7700'	266.29'	TP13

NOTE: TEST BORING AND TEST PIT LOCATIONS ARE APPROXIMATE.

QUALITY GEO ENGINEERING, P.C.
 877 ROUTE 4S
 SCHUYLERVILLE, NEW YORK
 PHONE (518) 372-4067
 FAX (518) 507-6113

SUBSURFACE EXPLORATION
 LOCATION PLAN

NEWBURGH ECSD
 CTE BUILDING
 WEST STREET
 NEWBURGH, NEW YORK

SCALE: N.T.S.
 DRAWN BY: TMK
 DATE: 1/6/2021
 PROJECT No.: SE20-042
 FIGURE No.: 2

APPENDIX A
SUBSURFACE EXPLORATION LOGS

DATE
 START: 12/3/2020
 FINISH: 12/3/2020
 SHEET 1 OF 1



BORING NO. B-2
 PROJ. NO. SE20-042
 SURF. ELEV. 263.4'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
 CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	2	3	5	7	8	0.4	Brown Loose Fine SAND, Some Silt, Little Gravel, Little Organics, Dry	
	2	2	3	5	5	8	1.1	Brown Loose SILT, Little Fine Sand, Trace Gravel, Trace Organics, Dry	
5	3	37	17	8	3	25	1.0	Gray Firm GRAVEL/ ROCK Fragments, AND Brown Fine SAND, Little Silt, Dry	
	4	1	2	10	27	12	0.3	Brown Firm Fine SAND AND GRAVEL, Little Silt, Dry	
	5	20	12	5	4	17	0.3	Gray Firm GRAVEL/ROCK Fragments, Little Sand, Dry	
10									
15	6	12	10	14	15	24	1.0	Brown Firm SILT, Little Sand	
20	7	50/0				REF	NR	Boring terminated with auger refusal at a depth of 20.0 feet.	REF = Sample Spoon Refusal NR = No Recovery
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. B-3
 PROJ. NO. SE20-042
 SURF. ELEV. 263.3'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
		1	1	1	4	3	5	1.2	Brown Loose Fine SAND AND SILT, Trace Gravel, Dry	
		2	2	3	4	10	7	NR		NR = No Recovery
5		3	5	3	4	3	7	0.2	Grades To "Little" Silt, "Little" Gravel	
		4	47	45	50/3		REF	1.0	Tan/Gray Very Compact Weathered ROCK FRAGMENTS	REF = Sample Spoon Refusal
									Boring terminated with auger refusal at a depth of 8.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10										
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. B-4
 PROJ. NO. SE20-042
 SURF. ELEV. 264.7'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
	/	1	9	7	9	9	16	0.5	Gray Firm F-M SAND, Some Gravel, Little Silt, Little Organics, Dry	REF = Sample Spoon Refusal NR = No Recovery
	/	2	11	6	3	5	9	0.3	Gray/Brown, Loose, Grades To "No" Organics	
5	/	3	24	11	3	2	14	1.0	Brown Firm SILT, Some Fine Sand, Dry	
	/	4	4	5	8	9	13	0.8	Brown Firm Fine SAND, Some Silt, Dry	
	/	5	49	100/3			REF	0.4	Very Compact Grades To "Trace" Rock Fragments	
10										
	/	6	50/0				REF	NR	Boring terminated with auger refusal at a depth of 13.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. B-5
 PROJ. NO. SE20-042
 SURF. ELEV. 264.5'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	1	1	1	2	2	1.0	Brown Very Loose SILT AND Fine SAND, Little Gravel, Trace Organics, Dry	
	2	2	3	3	5	6	1.0	Brown Loose Fine SAND, Little Silt, Little Gravel, Dry	
5	3	5	8	7	100/4	15	0.7	Firm, Grades To "Trace" Silt	NR = No Recovery REF = Sample Spoon Refusal
	4	50/0				REF	NR	Boring terminated with auger refusal at a depth of 6.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. B-6
 PROJ. NO. SE20-042
 SURF. ELEV. 260.0'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
		1	1	7	5	6	12	1.2	FILL: Dark Brown/Gray Firm F-M SAND, Some Silt, Little Gravel, Dry	
		2	1	6	5	4	11	0.1	Similar	
5		3	1	3	4	12	7	0.2	Loose, Grades To "Some" Gravel, "Little" Brick Fragments, "Trace" Organics	
		4	19	14	12	16	26	1.3	Brown Firm Fine SAND, Little Silt, Little Gravel, Dry	
		5	26	34	50/.2		REF	0.6	Very Compact, Grades To "Fine-Medium" SAND, "Some" Gravel	REF = Sample Spoon Refusal
10										
15		6	50/.1				REF	0.1	Gray Very Compact Rock Fragments, Little Sand	Groundwater was not encountered in bore hole upon completion of drilling.
									Boring terminated with auger refusal at a depth of 15.1 feet.	
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers S. Wolf

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. B-7
 PROJ. NO. SE20-042
 SURF. ELEV. 261.8'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	6	7	18	8	25	1.2	FILL: Gray Firm GRAVEL AND SAND, Little Asphalt	
	2	6	5	4	4	9	0.3	Loose	
5	3	10	9	9	7	18	0.5	Firm, Grades To "No" Asphalt, "Trace" Silt, "Trace" Organics	
	4	8	5	9	3	14		FILL: Brown Firm SILT, Some Sand, Little Gravel, Little Organics	
	5	8	7	7	7	14	0.2	FILL: Gray/Brown Firm GRAVEL, Some Sand, Little Silt	
10									
15	6	8	7	7	4	14	1.6	Gray/Brown Firm SILT, Some Sand, Little Gravel	
20	7	17	22	25	100/3	47	1.6	Gray, Very Compact, Grades to "Little" Fine Sand	REF = Sample spoon refusal NR = No recovery
	8	50/0				REF	NR	Boring terminated with auger refusal at a depth of 22.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/7/2020
 FINISH: 12/7/2020
 SHEET 1 OF 1



BORING NO. B-8
 PROJ. NO. SE20-042
 SURF. ELEV. 268.0'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD
CTE Building

LOCATION: Newburgh, NY

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
	/	1	1	1	4	2	5	0.9	Brown Loose SILT, Some Sand, Little Gravel, Little Organics, Dry	REF = Sample Spoon Refusal
	/	2	12	100/3			REF	0.3	Gray/Brown Very Compact GRAVEL, Some Sand, Little Silt, Little Organics, Dry	
5	/	3	8	12	15	25	27	0.7	Brown Firm F-C SAND, Some Silt, Little Gravel, Dry	
	/	4	15	21	27	31	48	0.4	Very Compact, Grades To "Some" Gravel	
	/	5	14	8	4	8	12	0.7	Firm, Grades To "AND" SILT, "Trace" Gravel	
10										
15										
20										
25										
30										
35										
40										

Boring terminated with auger refusal at a depth of 12.0 feet.
 Groundwater was not encountered in bore hole upon completion of drilling.

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/9/2020
 FINISH: 12/9/2020
 SHEET 1 OF 1



BORING NO. B-9
 PROJ. NO. SE20-042
 SURF. ELEV. 264.4'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
 CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	2	5	10	12	15	1.4	Dark Brown Firm Fine SAND, Some Gravel, Little Silt, Little Organics, Dry	
	2	12	10	7	9	17	0.1	Brown, Grades To "No" Organics	
5	3	3	12	14	12	26	1.3	Contains Root Fragments	
	4	12	12	10	5	22	1.0	Grades To "Some" Silt, "No" Gravel	
	5	9	14	12	6	26	1.0	Brown Firm SILT, Some F-M Sand, Wet	
10									
15	6	9	15	100/2		REF	0.8	Brown Very Compact F-M SAND, Some Silt, Little Gravel, Moist	REF = Sample Spoon Refusal
								Boring terminated with auger refusal at a depth of 16.5 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/8/2020
 FINISH: 12/8/2020
 SHEET 1 OF 1



BORING NO. B-10
 PROJ. NO. SE20-042
 SURF. ELEV. 262.8'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
		1	1	5	7	6	12	1.3	FILL: Brown Firm Fine SAND, Little Silt, Trace Gravel, Dry	
		2	33	29	30	41	59	1.0	Very Compact, Grades To "Little" Gravel, "Little" Organics	
5		3	14	10	8	7	18	1.5	Dark Brown, Firm, Grades To "Some" Silt, "Trace" Gravel, "Trace" Glass	
		4	6	6	5	5	11	1.3	Dark Gray, Grades To "Fine-Medium" SAND, "No" Glass	
		5	2	2	2	2	4	1.0	Loose, Grades To "Little" Organics	
10										
15		6	12	8	8	7	16	1.6	Brown Firm Fine SAND, Trace Silt, Trace Gravel, Dry	
20		7	9	12	21	33	33	1.7	Compact, Grades To "Little" Silt	
25									Boring terminated with auger refusal at a depth of 24.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers S. Wolf

DATE
 START: 12/8/2020
 FINISH: 12/8/2020
 SHEET 1 OF 1



BORING NO. B-11
 PROJ. NO. SE20-042
 SURF. ELEV. 261.6'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	3	5	6	8	11	1.4	FILL: Dark Brown Firm Fine SAND, Little Silt, Little Gravel, Dry	
	2	9	11	10	9	21	1.8	Grades To "Some" Gravel	
5	3	12	100/1			REF	0.5	Gray Very Compact ROCK FRAGMENTS, Little Sand, Dry	REF = Sample Spoon Refusal
								Boring terminated with auger refusal at a depth of 6.5 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/8/2020
 FINISH: 12/8/2020
 SHEET 1 OF 1



BORING NO. B-12
 PROJ. NO. SE20-042
 SURF. ELEV. 254.6'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	12	24	100/3		REF	0.5	Brown Very Compact F-C SAND, Some Silt, Some Gravel, Little Organics	REF = Sample Spoon Refusal NR = No Recovery
	2	50/0				REF	NR	Boring terminated with auger refusal at a depth of 3.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
5									
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/3/2020
 FINISH: 12/3/2020
 SHEET 1 OF 1



BORING NO. P-1
 PROJ. NO. SE20-042
 SURF. ELEV. 267.5'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	7	9	6	2	15	0.7	Brown Firm Fine SAND, Some Silt, Little Gravel, Trace Organics, Dry	
	2	3	7	6	4	13	0.9	Grades To "Some" Gravel, "Trace" Silt, "No" Organics	
5	3	100/4				REF	0.2	Very Compact, Grades To "Fine-Coarse" SAND	REF = Sample Spoon Refusal NR = No Recovery
	4	100/0				REF	NR	Boring terminated with auger refusal at a depth of 6.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. P-2
 PROJ. NO. SE20-042
 SURF. ELEV. 263.1'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	2	2	3	3	5	0.7	FILL: Brown Loose Fine SAND, Some Silt, Little Gravel, Trace Organics, Dry	
	2	5	4	4	3	8	0.9	Grades To "Some" Concrete	
5	3	2	2	2	2	4	0.7	Grades To "Little" Gravel/Concrete	
	4	1	2	1	2	3	0.6	Very Loose, Grades To "Some" Concrete/Gravel	
	5	1	2	2	2	4	0.7	Brown Loose F-M SAND, Some Silt, Little Gravel, Dry	
10								Boring terminated at a depth of 10.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/7/2020
 FINISH: 12/7/2020
 SHEET 1 OF 1



BORING NO. P-3
 PROJ. NO. SE20-042
 SURF. ELEV. 268.1'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	1	1	1	2	2	0.7	Brown Very Loose SILT AND Fine SAND, Little Organics, Dry	
	2	10	12	50/1		REF	0.2	Very Compact, Grades To "Some" Gravel	REF = Sample Spoon Refusal
5								Boring terminated with auger refusal at a depth of 4.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/7/2020
 FINISH: 12/7/2020
 SHEET 1 OF 1



BORING NO. P-4
 PROJ. NO. SE20-042
 SURF. ELEV. 264.2'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
 CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	WH	WH	WH	1	WH	0.2	Brown Very Loose SILT, Some Fine Sand, Little Organics	WH = Weight of hammer and rods REF = Sample spoon refusal
	2	15	50/1			REF	0.4	Brown F-C SAND, Some Silt, Little Gravel, Wet Gray Medium Hard LIMESTONE Rock, Slightly Weathered, Moderately Fractured	
5									Run#1, 2.5'-7.5' REC = 82% RQD = 34%
10								Boring terminated at a depth of 7.5 feet.	Groundwater was not encountered in bore hole prior to rock coring.
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/3/2020
 FINISH: 12/3/2020
 SHEET 1 OF 1



BORING NO. IF-1
 PROJ. NO. SE20-042
 SURF. ELEV. 270.3'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	4	7	8	5	15	1.3	Brown Firm Fine SAND, Some Gravel, Little Silt Dry	
	2	9	100/4			REF	0.6	Very Compact	REF = Sample Spoon Refusal
	3	100/0				REF	NR		NR = No recovery
5								Boring terminated at a depth of 4.0 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/3/2020
 FINISH: 12/3/2020
 SHEET 1 OF 1



BORING NO. IF-2
 PROJ. NO. SE20-042
 SURF. ELEV. 269.0'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	3	2	2	2	4	1.1	Brown Loose SILT, Some Fine Sand, Trace Gravel, Trace Organics	
	2	11	8	24	32	32	1.4	Brown Compact Fine SAND, Some Gravel, Little Silt, Dry	
	3	100/3				REF	0.1	Gray Very Compact Rock Fragments, Some Silt	REF = Sample Spoon Refusal
5								Boring terminated at a depth of 4.3 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/4/2020
 FINISH: 12/4/2020
 SHEET 1 OF 1



BORING NO. IF-3
 PROJ. NO. SE20-042
 SURF. ELEV. 257.4'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
		0/6	6/12	12/18	18/24	N			
	1	WH	WH	WH	WH	WH	0.2	Black Very Loose Topsoil, Some Silt, Some Sand	
	2	1	2	1	2	3	0.3	Brown/ Black Very Loose SILT, Little Sand, Little Gravel, Little Organics	
5	3	3	10	21	50/1	31	1.0	Compact, Grades To "AND" Fine SAND, "No" Organics	
								Gray Rock Fragments	
								Boring terminated at a depth of 5.6 feet.	Groundwater was not encountered in bore hole upon completion of drilling.
10									
15									
20									
25									
30									
35									
40									

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

DATE
 START: 12/7/2020
 FINISH: 12/7/2020
 SHEET 1 OF 1



BORING NO. IF-4
 PROJ. NO. SE20-042
 SURF. ELEV. 236.1'
 G.W. DEPTH See Notes

PROJECT: Newburgh CSD LOCATION: Newburgh, NY
CTE Building

DEPTH (ft.)	SAMPLES	SAMPLE NO.	BLOWS ON SAMPLER					REC. (ft.)	SOIL OR ROCK CLASSIFICATION	NOTES
			0/6	6/12	12/18	18/24	N			
		1	1	5	8	8	13	1.7	Brown Firm Fine SAND, Little Silt, Little Gravel, Dry	
		2	1	3	7	8	10	1.3	Wet	
5		3	10	16	15	16	31	1.4	Compact, Grades To "Some" Gravel	
		4	9	12	12	12	24	1.0	Firm Grades To "No" Gravel	
									Boring terminated at a depth of 8.0 feet.	Free standing water was not encountered in bore hole upon completion of drilling.
10										
15										
20										
25										
30										
35										
40										

N = NO. BLOWS TO DRIVE 2-INCH SPLIT SPOON 12-INCHES WITH A 140 LB. PIN WT. FALLING 30-INCHES PER BLOW
 DRILLER: J. Leonhardt DRILL RIG TYPE: Diedrich D-50 CLASSIFICATION: Visual by
S. Wolf
 METHOD OF INVESTIGATION: ASTM D1586 using 2.25" I.D. Hollow Stem Augers

EXAMPLE KEY TO SUBSURFACE EXPLORATION LOGS

DATE START: <u>XX/XX/XX</u> FINISH: <u>XX/XX/XX</u> SHEET <u>X</u> OF <u>X</u>	 <p style="font-size: small;">QC/QA LABORATORIES, INC. GEOTECHNICAL ENGINEERING SERVICES</p>	PROJ. NO. <u>XX-XXXX</u> HOLE NO. <u>X-X</u> SURF. ELEV. <u>XXX.X'</u> G.W. DEPTH <u>X.X'</u>
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PROJECT: <u>PROJECT NAME</u>	LOCATION: <u>PROJECT LOCATION</u>
<u>PROJECT NAME</u>	<u>PROJECT LOCATION</u>

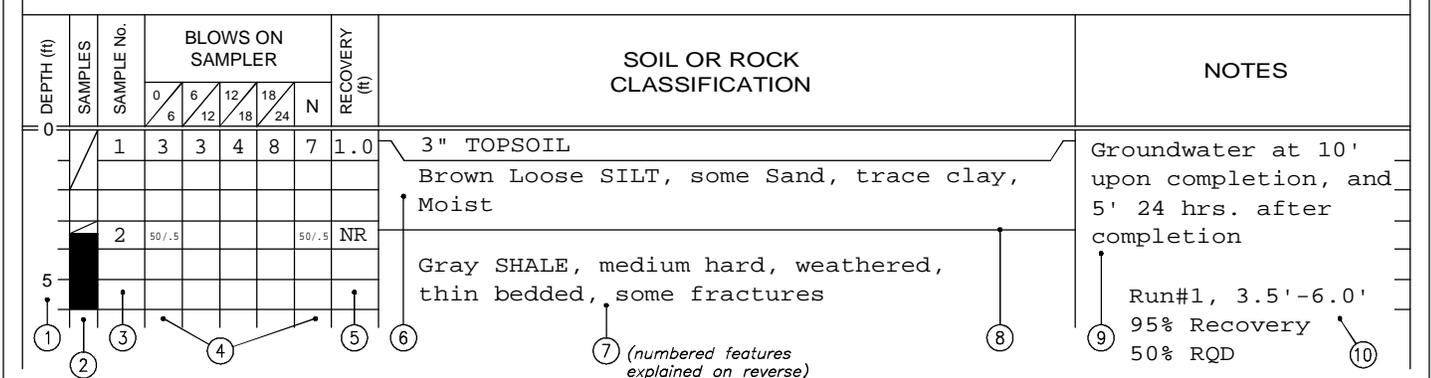


TABLE I

	Split Spoon Sample
	Shelby Tube Sample
	Geoprobe Macro-Core
	Auger or Test Pit Sample
	Rock Core

TABLE II

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on basis of plasticity.

Soil Type	Soil Particle Size	
Boulder	>12"	Coarse Grained (Granular)
Cobble	3" - 12"	
Gravel - Coarse	3" - 3/4"	
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	
- Medium	#10 - #40	Fine Grained
- Fine	#40 - #200	
Silt - Non Plastic (Granular)	<#200	
Clay - Plastic (Cohesive)		

TABLE III

The following terms are used in classifying soils consisting of mixtures of two or more soil types. The estimate is based on weight of total sample.

Term	Percent of Total Sample
"and"	35 - 50
"some"	20 - 35
"little"	10 - 20
"trace"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE IV

The relative compactness or consistency is described in accordance with the following terms:

Granular Soils		Cohesive Soils	
Term	Blows per Foot, N	Term	Blows per Foot, N
Very Loose	0 - 4	Very Soft	0 - 2
Loose	4 - 10	Soft	2 - 4
Firm	10 - 30	Medium	4 - 8
Compact	30 - 50	Stiff	8 - 15
Very Compact	>50	Very Stiff	15 - 30
		Hard	>30

(Large particles in the soils will often significantly influence the blows per foot recorded during the penetration test)

TABLE V

Varved	Horizontal uniform layers or seams of soil(s).
Layer	Soil deposit more than 6" thick.
Seam	Soil deposit less than 6" thick.
Parting	Soil deposit less than 1/8" thick.
Laminated	Irregular, horizontal and angled seams and partings of soil(s).

TABLE VI

Rock Classification Term	Meaning	Rock Classification Term	Meaning
Hardness	- Soft	Bedding	- Laminated (<1")
	- Medium Hard		- Thin Bedded (1" - 4")
	- Hard		- Bedded (4" - 12")
	- Very Hard		- Thick Bedded (12" - 36")
	- Massive (>36")		
Weathering	- Very Weathered	(Fracturing refers to natural breaks in the rock oriented at some angle to the rock layers)	
	- Weathered		
	- Sound		

Scatched by fingernail
 Scatched easily by penknife
 Scatched with difficulty by penknife
 Cannot be scatched by penknife
 Judged from the relative amounts of disintegration, iron staining, core recovery, clay seams, etc.

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the general observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a small fraction of the soils at the site and may not be representative of subsurface conditions between and/or away from the boring locations or between the sampled intervals. The data presented on the Subsurface Logs along with the recovered samples provide a basis for estimating the engineering characteristics of the soils at the site. The evaluation must consider all the recorded details and their relative significance to the project. It is common that evaluation of standard subsurface data indicates the need for additional testing and/or sampling to more accurately evaluate the subsurface conditions. Any evaluation of the data presented on the Subsurface Logs must be performed by qualified professionals. The following information defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered. The paragraph numbers below correspond to the numbered features identified on the opposite page.

1. The figures in the Depth column define the scale of the Subsurface Log.
2. The Samples column shows a graphical representation of the depth and type of sampling performed. See Table I for descriptions of the symbols used to represent the various types of samples.
3. The Sample No. is used for identification on sample containers and laboratory test reports.
4. Blows on Sampler - shows the results of the "Standard Penetration Test" (SPT), recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required to drive the sampler for each six inch increment is recorded. The first six inches of penetration is considered a seating drive. The sum of the number of blows required for the second and third six inch increments is termed the penetration resistance, N. The outside diameter of the sampler, hammer weight and length of drop are noted at the bottom of the Subsurface Log.
5. Recovery - Shows the length of the recovered sample.
6. All recovered soil samples are reviewed in the laboratory by an engineering technician or geotechnical engineer, unless noted otherwise. Visual descriptions are made on the basis of a combination of the driller's field descriptions and noted observations together with the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification System (ASTM D 2487) with regard to the particle size and plasticity (See Table No. II), and the Unified Soil Classification group symbols for the soil types are sometimes included with the soil classification. Additionally, the relative portion, by weight, of two or more granular soil types is described in accordance with "Suggested Methods of Test for Identification of Soils" by D.M. Burmister, ASTM Special Technical Publication 479, June 1970, (See Table No. III). Description of the relative soil density or consistency is based upon the penetration records as defined in Table No. IV. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet or saturated. Water introduced into the boring either naturally or during drilling may have affected the moisture condition of the recovered samples. Special terms are used as required to describe soil deposition in greater detail; several such terms are listed in Table V. When sampling gravelly soils with a standard two inch diameter split spoon sampler, the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the sampler blows or through the action of the drill rig as reported by the driller.
7. Rock descriptions are based on review of the recovered rock core samples and the driller's notes. Typical rock classification terms are included in Table VI.
8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines delineate apparent changes in soil type, based upon review of recovered soil samples and the driller's notes. Dashed lines indicate a lesser degree of certainty with respect to either a change in soil type or where such a change may occur.
9. Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to understand that the reliability of the water observations depends upon the soil type (water level does not readily stabilize in a bore hole through fine grained soils), and that any drill water used to advance the boring may have influenced the observations. Typically, the ground water level will fluctuate with seasonal changes in precipitation patterns. One or more perched or trapped water levels may exist in the ground seasonally. Generally, it is prudent to install a groundwater observation well to better define water levels.
10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run length. The Rock Quality Designation (RQD) is the total length of pieces of recovered core exceeding 4 inches divided by the core run length. The size of the core barrel used is also noted.

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-1
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 270.2'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 6"	Dark Brown TOPSOIL	
6" - 5'	Brown SILT, Little Fine-Medium Sand, Trace Gravel, Cobbles/Boulders	
5'	Refusal on Bedrock	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 **TEST PIT NO.:** TP-2
PROJECT: Newburgh CSD CTE **PROJECT NO.:** SE20-042
CONTRACTOR: QCQA Labs **GROUND ELEV.:** 267.5'
INSPECTOR: Tod M. Kobik, P.E. **WEATHER:** Overcast, Cold
EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 3"	FILL: Gray Crusher Run STONE	
3" - 5'	Brown SILT AND Fine-Medium SAND, Some Gravel, Cobbles/Boulders	
5' - 6'	Gray COBBLES AND BOULDERS	Groundwater was not encountered in test pit.
6'	Refusal on Bedrock	

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-3
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 269.7'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 7"	Topsoil	
7" - 1.5'	Brown SILT, Little Clay, Little Fine-Medium Sand, Little Gravel, Cobbles/Boulders	
1.5' - 3'	Refusal on Bedrock (depth varies)	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 **TEST PIT NO.:** TP-4
PROJECT: Newburgh CSD CTE **PROJECT NO.:** SE20-042
CONTRACTOR: QCQA Labs **GROUND ELEV.:** 267.5'
INSPECTOR: Tod M. Kobik, P.E. **WEATHER:** Overcast, Cold
EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 2'	FILL: Brown-Gray Fine-Coarse SAND, Some Silt, Some Gravel	
2' - 3.5'	Brown SILT AND Fine-Medium SAND, Some Gravel, Cobbles/Boulders	
3.5'	Refusal on Bedrock	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 **TEST PIT NO.:** TP-5
PROJECT: Newburgh CSD CTE **PROJECT NO.:** SE20-042
CONTRACTOR: QCQA Labs **GROUND ELEV.:** 265.5'
INSPECTOR: Tod M. Kobik, P.E. **WEATHER:** Overcast, Cold
EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 3.5'	FILL: Brown-Black ASH AND CINDERS, Little Glass	
3.5' - 8'	Brown SILT AND Fine-Medium SAND, Some Gravel, Cobbles/Boulders, Dry	
8' - 10'	Gray Fine-Coarse SAND, Some Gravel, Some Silt, Dry	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-6
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 265.3'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 3'	FILL: Brown-Gray GRAVEL AND Fine-Coarse SAND, Little Silt	Groundwater was not encountered in test pit.
3' - 5'	FILL: Brown-Black ASH AND CINDERS	
5' - 9'	Brown SILT, Some Fine-Medium Sand, Little Gravel, Cobbles/Boulders, Dry	
9'	Refusal on Bedrock	

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-7
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 265.8'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 4"	Topsoil	
4" - 5.5'	Brown SILT, Some Fine-Medium Sand, Some Gravel, Cobbles/Boulders	Groundwater was not encountered in test pit.
5.5' - 7'	Cobbles/Boulders	
7'	Refusal on Bedrock	

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-8
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 255.8'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 7"	Topsoil	
7" - 5'	Brown Fine-Medium SAND AND SILT, Some Gravel, Cobbles/Boulders	
5'	Refusal on Bedrock	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-9
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 263.3'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 6"	Topsoil	
6" - 10'	Brown SILT AND Fine-Medium SAND, Little Gravel, Cobbles/Boulders, Dry	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 **TEST PIT NO.:** TP-10
PROJECT: Newburgh CSD CTE **PROJECT NO.:** SE20-042
CONTRACTOR: QCQA Labs **GROUND ELEV.:** 263.1'
INSPECTOR: Tod M. Kobik, P.E. **WEATHER:** Overcast, Cold
EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 3'	FILL: Brown GRAVEL, Some Sand, Little Silt, Cobbles	Groundwater was not encountered in test pit.
3' - 8'	FILL: Gray GRAVEL AND SILT, Little Fine-Medium Sand, Trace Clay, Cobbles	
8' - 10'	FILL: WOOD MULCH	
10' - 12'	Brown SILT, Little Fine-Medium Sand, Trace Gravel, Cobbles	

TEST PIT LOG

DATE: 12/2/20 **TEST PIT NO.:** TP-11
PROJECT: Newburgh CSD CTE **PROJECT NO.:** SE20-042
CONTRACTOR: QCQA Labs **GROUND ELEV.:** 262.7'
INSPECTOR: Tod M. Kobik, P.E. **WEATHER:** Overcast, Cold
EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 5"	Topsoil	
5" - 2.5'	FILL: Brown GRAVEL, Some Fine-Medium Sand, Some Silt Cobbles, Moist	Groundwater was not encountered in test pit.
2.5' - 8.5'	Becomes Gray, Contains Boulders, Moist	
8.5' - 9'	Brown SILT, Some Fine-Medium Sand, Little Gravel, Cobbles	

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-12
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 268.5'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 4"	Topsoil	
4" - 9'	Brown GRAVEL, Some Silt, Some Fine-Medium Sand, Cobbles, Dry	Groundwater was not encountered in test pit.

TEST PIT LOG

DATE: 12/2/20 TEST PIT NO.: TP-13
 PROJECT: Newburgh CSD CTE PROJECT NO.: SE20-042
 CONTRACTOR: QCQA Labs GROUND ELEV.: 266.3'
 INSPECTOR: Tod M. Kobik, P.E. WEATHER: Overcast, Cold
 EXCAVATION EQUIPMENT: Mini Excavator

DEPTH	SOIL DESCRIPTION	NOTES
0 - 6"	Topsoil	Groundwater was not encountered in test pit.
6" - 2'	Brown SILT, Some Fine-Medium Sand, Little Gravel, Cobbles/Boulders	
2'	Refusal on Bedrock	

APPENDIX B

**FILL MATERIAL AND
PLACEMENT RECOMMENDATIONS**

FILL MATERIAL AND PLACEMENT RECOMMENDATIONS

I. Fill Material Recommendations

A. Subbase Stone

Subbase Stone should consist of a crusher run stone meeting the material and gradation requirements of New York State Department of Transportation (NYSDOT), Standard Specifications, Item 304.12 – Type 2 Subbase Course. Subbase Stone for pavement construction should consist of Item 304.12 – Type 2 or Item 304.14 – Type 4 Subbase Course.

B. Structural Fill

Structural Fill should consist of an imported well graded crusher run stone or bank-run sand and gravel, which is free of clay, expansive shale, organics and friable or deleterious particles. Imported Structural Fill should also conform to the following gradation requirements:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
3 inch	100
¼ inch	25-65
No. 40	5-40
No. 200	0-10

C. Drainage Stone

Drainage Stone should consist of a blend of crusher run stone or crushed gravel meeting the material and gradation requirements of ASTM C33 size 57 Coarse Aggregate as follows:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
1-1/2 inch	100
1 inch	95-100
1/2 inch	25-60
No. 40	0-10
No. 8	0-5

Drainage Stone should be wrapped in a non-woven geotextile fabric, such as Mirafi 140 N, or equivalent.

D. General Fill

General Fill may be used for backfill in non-loaded areas outside of foundation, structure, slab-on-grade and paved areas. General Fill may consist of on-site or imported soils, which are free of topsoil, organics, pyritic materials, debris and deleterious materials and are of a moisture content suitable for proper compaction.

II. Fill Placement and Compaction Recommendations

All controlled fill placed beneath foundations, structures, utilities, slab-on-grade and pavement areas should be compacted to a minimum of 95 percent of the maximum dry density as measured by the modified Proctor test (ASTM D1557), or as directed by the geotechnical engineer. Fill placed in non-loaded grass areas can be compacted to a minimum of 90 percent of the maximum dry density (ASTM D1557). Drainage Stone should be compacted with several passes of a steel drum roller or plate tamper (compaction testing is not required for Drainage Stone).

Placement of Structural Fill and Subbase Stone should not exceed a maximum loose lift thickness of 9 inches and should be reduced in conjunction with the compaction equipment used so that the required density is attained. Drainage Stone can be placed in maximum 24 inch thick loose lifts.

Fill should have a moisture content within 2 percent of the optimum moisture content prior to compaction. Subgrades should be properly drained and protected from moisture and frost. Placement of fill on frozen subgrades is not acceptable. It is recommended that all fill placement and compaction be monitored and tested by qualified geotechnical personnel.

III. Quality Assurance Testing

The following minimum laboratory and field quality assurance testing frequencies are recommended to confirm fill material quality and post placement and compaction conditions. These minimum frequencies are based on generally uniform material properties and placement conditions. Should material properties vary or conditions at the time of placement vary (i.e. moisture content, placement and compaction, procedures or equipment, etc.), then additional testing is recommended. Additional testing, if required, should be determined by qualified geotechnical personnel based on evaluation of the actual fill material and construction conditions.

A. Laboratory Testing of Material Properties

- Moisture content (ASTM D-2216) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Grain Size Analysis (ASTM D-422) - 1 test per 4000 cubic yards or no less than 2 tests per each material type.
- Modified Proctor Moisture Density Relationship (ASTM D-1557) 1 test per 4000 cubic yards or no less than 1 test per each material type.

B. Field In-Place Moisture/Density Testing (ASTM D-6938)

- Backfilling along trenches and foundation walls - 1 test per 50 lineal feet per lift.
- Backfilling Isolated Excavations (i.e. column foundations) 1 test per lift.
- Filling in open areas for slab-on-grade and pavement construction - 1 test per 2500 square feet per lift.

APPENDIX C

**INFORMATION REGARDING THIS
GEOTECHNICAL ENGINEERING REPORT**

IMPORTANT INFORMATION REGARDING THIS GEOTECHNICAL ENGINEERING REPORT

Quality Geo Engineering, P.C. (Quality Geo), has endeavored to prepare this report in accordance with generally accepted geotechnical engineering principles and practices on behalf of QC/QA Laboratories, Inc. (QCQA Labs). Geotechnical engineering analyses and evaluations are based partly on judgment and opinion, and are therefore far less exact than other engineering disciplines. Accordingly, Quality Geo believes that providing the report user with information regarding the preparation and limitations of this report will aid in the proper interpretation and implementation of the conclusions and recommendations presented in this report. The following information is provided in an effort to reduce potential geotechnical-related delays, cost over-runs and other problems that can develop during the design and construction process.

SCOPE OF SERVICES: The scope of this report is limited to the specific items identified in QCQA Labs' Proposal for services for this project. The scope of services is limited to a geotechnical engineering evaluation of the conditions disclosed by the subsurface exploration and does not include any geoenvironmental assessment or investigation for the presence, absence or prevention of any hazardous or toxic materials or conditions (or mold) in the soil, groundwater or surface water within or beyond the project site. Unanticipated environmental problems can lead to significant project cost over-runs and QCQA Labs recommends that the Owner retain a geoenvironmental consultant to discuss risk management guidance.

PROJECT-SPECIFIC FACTORS: The conclusions and recommendations presented in this report were prepared based on project-specific factors described in the report, such as the size, loading, type of construction and intended use of the structure; the location of the structure on the site; planned structure elevation(s) and site grading; other planned or existing site improvements, such as access roads, parking lots, underground utilities; and any other pertinent project information. Changes to the project details may alter the factors considered in development of the report conclusions and recommendations. As such, neither Quality Geo nor QCQA Labs shall be responsible nor liable for problems that may develop if we are not consulted regarding any changes to the project-specific factors that were assumed during preparation of the report.

SUBSURFACE CONDITIONS: The subsurface exploration program for this project consisted of sampling only at discrete test locations. Quality Geo has used judgment to infer the subsurface conditions between the discrete test locations. The conclusions and recommendations presented in this report were based on the subsurface conditions disclosed/inferred at and between the discrete test locations at the time the subsurface exploration program was performed. We point out that surface and subsurface conditions at the site are subject to change subsequent to preparation of this report. Such changes may include floods, earthquakes, groundwater fluctuations, and construction activities at the site and/or adjoining properties. It should be understood that the actual subsurface conditions could vary from the conditions inferred by Quality Geo between and away from the discrete test locations, which could be revealed during construction. As such, QCQA Labs should be retained during construction to confirm that the subsurface conditions are consistent with the conditions disclosed by the subsurface exploration program, and to refine our conclusions and recommendations in the event that the subsurface conditions differ from those disclosed by the subsurface exploration program.

USE OF THIS GEOTECHNICAL ENGINEERING REPORT: This report has been prepared for the exclusive use of our client, and any other parties specifically identified in the report, for specific application to the site and project-specific conditions described in the report. This report should not be applied to any other site or project, or for any uses other than those originally intended without our consent.

MISINTERPRETATION OF THIS REPORT: The conclusions and recommendations presented in this report are subject to misinterpretation by the design team and contractors, which can result in costly problems. The risk of misinterpretation by the design team can be reduced by having appropriate members of the design team confer with QCQA Labs regarding the conclusions and recommendations presented in this report prior to completing the plans and specifications. In addition, QCQA Labs should be retained to review pertinent elements of the design team's final plans and specifications prior to bidding to confirm that the recommendations presented in this report have been properly interpreted and applied. The risk of misinterpretation by contractors can be reduced by retaining QCQA Labs to attend prebid and preconstruction conferences, and to provide construction observation.

COMPONENTS OF THIS REPORT: Subsurface exploration logs, figures, tables and any other report components are subject to misinterpretation if they are separated from this report. This may occur if copies of the boring logs or other report components are given to the contractors during the bid preparation process. To minimize this risk, report components should not be separated from the report and only complete copies of this report should be distributed as appropriate.

ALTERATION OF THIS REPORT: It is a violation of Section 7209 Subdivision 2 of the New York State Education Law for any person to alter this report in any way, except under the direction of a licensed professional engineer. Neither QCQA Labs nor Quality Geo shall be liable for any alterations that are made to this report without our knowledge and written consent.

DOCUMENT 003113 - PRELIMINARY SCHEDULES

1.1 PROJECT SCHEDULE

- A. This Document is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but do not affect Contract Time requirements. This Document and its attachments are not part of the Contract Documents.
- B. This project is scheduling to be completed including closeout within (26) months of Contract award and/or Notice to Proceed letter. Refer to Multiple Contract Summary Section 011200 for further information.
- C. Notice to Proceed to be provided June of 2024 and Construction to be complete at the end of August 2026. See provided Milestone Schedule for more information.

END OF DOCUMENT 003113

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Newburgh Enlarged City School District New CTE Building Milestone Schedule

ID	Task Mode	Task Name	Duration	Start	Finish	2024												2025												2026											
						Qtr 4, 2023			Qtr 1, 2024			Qtr 2, 2024			Qtr 3, 2024			Qtr 4, 2024			Qtr 1, 2025			Qtr 2, 2025			Qtr 3, 2025			Qtr 4, 2025			Qtr 1, 2026			Qtr 2, 2026			Qtr 3, 2026		
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	📅	CTE Building	1035 days	Wed 11/1/23	Mon 8/31/26																																				
2	📅	100% CD - SED Submission	60 days	Tue 2/13/24	Fri 4/12/24																																				
3	📅	Bid Advertisement	4 days	Fri 4/12/24	Mon 4/15/24																																				
4	📅	Bid walk Through	0 days	Mon 4/29/24	Mon 4/29/24																																				
5	📅	Projected SED Approval	0 days	Fri 4/12/24	Fri 4/12/24																																				
6	📅	Bid period	39 days	Mon 4/15/24	Thu 5/23/24																																				
7	📅	Bid opening	1 day	Thu 5/23/24	Thu 5/23/24																																				
8	📅	Bid leveling	11 days	Fri 5/24/24	Mon 6/3/24																																				
9	📅	Low Bidders Recommendation to BoE	0 days	Tue 6/4/24	Tue 6/4/24																																				
10	📅	BoE approval of Lower bidders	0 days	Tue 6/11/24	Tue 6/11/24																																				
11	📅	NTP issued to bidders	0 days	Wed 6/12/24	Wed 6/12/24																																				
12	📅	Contracts issued to Low Bidders	15 days	Wed 6/12/24	Wed 6/26/24																																				
13	📅	Awarded contractors upfront submittals IE: insurance, bonds	21 days	Wed 6/12/24	Tue 7/2/24																																				
14	📅	GC submits first site logistics plan-See contract for other requirements	15 days	Wed 6/12/24	Wed 6/26/24																																				
15	📅	Site work Commences	10 days	Mon 7/8/24	Wed 7/17/24																																				
16	📅	Construction in progress	698 days	Thu 7/18/24	Mon 6/15/26																																				
17	📅	Construction Substantial Completion	40 days	Mon 6/15/26	Fri 7/24/26																																				
18	📅	Temp Trailer/Electric Demobilization parking lot Completion	26 days	Mon 6/29/26	Fri 7/24/26																																				
19	📅	District setup interiors	33 days	Mon 7/27/26	Fri 8/28/26																																				
20	📅	Testing DATA systems- Finals	33 days	Mon 7/27/26	Fri 8/28/26																																				
21	📅	Move In	0 days	Mon 8/31/26	Mon 8/31/26																																				

CTE Milestone Schedule
Date: Thu 4/11/24

Task		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Manual Progress	
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Deadline			
Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Progress			

SECTION 004116.01 - BID FORM CONTRACT NO. 01 – General Construction / Sitework (GC-01)

Newburgh Enlarged City School District – New CTE Building

BIDDER INFORMATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: (____) _____

FACSIMILE: (____) _____

BID TO (Owner): Attention: Purchasing Agent
Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

PRIME CONTRACT: Contract No. 01 General Construction / Sitework (GC-01)

PROJECT TITLE: Newburgh Enlarged City School District –
New CTE building (CTE)

SED Project Control No. CTE Building SED#44-16-00-01-0-053-001

CSArch PROJECT NO: 108-2303.00

1. **Representations:** By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement for the Base Bid of:

2. **Base Bid:** _____ (\$ _____)
(Words) (Figures)

In all locations sums shall be expressed in both words and figures. In case of discrepancy, written word governs.

3. **Addenda:** The Bidder acknowledges receipt of the following Addendum:

No. _____ Dated _____

4. **Alternates:** None.

5. **Bid Security:** Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of 5 percent of the written Base Bid amount

6. **Allowances:**

A. \$300,000.00 Allowance for Rock Removal for Site Work

B. \$50,000.00 Allowance for Exterior Building Signage and Behind Front Entrance Desk

7. **Time of Commencement and Completion:** The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in Specification Section 011200 Multiple Contract Summary and Section 003113 Preliminary Schedules.

8. **Rejection of Bids:** The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

9. **Execution of Contract:** If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

10. **Signature:**

(Signature)

(Name – Printed)

(Title – Printed

(Date)

11. **Attachments:** Obtain and attach the following documents to each individual Bid.

- a. Resolution
- b. Non-Collusive Bid Certification
- c. Iran Divestment Act Affidavit
- d. Bid Security
- e. Subcontractor List
- f. Substitution List

1. **Unit Costs:** This form shall be filled out and submitted by the Contractor. The UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. As itemized in the "Instructions to Bidders" for a complete Bid Form include the following which must be filled out completely.

- a. Unit costs

Contract Number: Contract No. 01 General Construction (GC-01)

Contract Titles: Newburgh Enlarged City School District –
New CTE building (CTE)

Bidder:

Date:

* Refer to Section 012200 Unit Prices for additional information

Unit Prices – Additional Fee Schedule – All prices are Furnish and Install

(Unit cost don't apply for large quantities, and the Architect, Owner and the Construction Manager reserve the right to negotiate an overall change order and not apply the unit costs.)

Item	Description	Unit	Unit Price - ADD	Drawing Reference
1	Unsuitable Soil Excavation & Removal	CY		
2	Engineered Fill	CY		
3	Rock Removal	CY		

END OF SECTION 004116.01

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SECTION 004116.02 - BID FORM CONTRACT MC-02 – Mechanical Contractor (MC-01)

Newburgh Enlarged City School District – New CTE Building

BIDDER INFORMATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: (____) _____

FACSIMILE: (____) _____

BID TO (Owner): Attention: Purchasing Agent
Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

PRIME CONTRACT: Contract No. 02 Mechanical Contractor (MC-01)

PROJECT TITLE: Newburgh Enlarged City School District –
New CTE building (CTE)

SED Project Control No. *CTE Building SED#44-16-00-01-0-053-001*

CSArch PROJECT NO: 108-2303.00

1. **Representations:** By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement for the Base Bid of:

2. **Base Bid:** _____ (\$ _____)
(Words) (Figures)

In all locations sums shall be expressed in both words and figures. In case of discrepancy, written word governs.

3. **Addenda:** The Bidder acknowledges receipt of the following Addendum:

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____

4. **Alternates:** None.

5. **Bid Security:** Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of 5 percent (5%) of the written Base Bid amount.

6. **Allowances:**

A. N/A Allowance for unforeseen conditions for Mechanical Work.

7. **Time of Commencement and Completion:** The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in Specification Section 011200 Multiple Contract Summary and Section 003113 Preliminary Schedules.

8. **Rejection of Bids:** The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

9. **Execution of Contract:** If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

10. **Signature:**

(Signature)

(Name – Printed)

(Title – Printed)

(Date)

11. **Attachments:** Obtain and attach the following documents to each individual Bid.
 - a. Corporate Resolution
 - b. Non-Collusion Affidavit
 - c. Iran Divestment Act Affidavit
 - d. Bid Security
 - e. Subcontractor List
 - f. Substitution List

12. **Unit Costs:** N/A

END OF SECTION 004116.02

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SECTION 004116.03 - BID FORM CONTRACT NO. 03 – Plumbing Contractor (PC-01)

Newburgh Enlarged City School District – New CTE Building

BIDDER INFORMATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: (_____) _____

FACSIMILE: (_____) _____

BID TO (Owner): Attention: Purchasing Agent
Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

PRIME CONTRACT: Contract No. 03 – Plumbing Contractor (PC-01)

PROJECT TITLE: Newburgh Enlarged City School District –
New CTE building (CTE)

SED Project Control No. CTE Building SED#44-16-00-01-0-053-001

CSArch PROJECT NO: 108-2303.00

1. **Representations:** By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement for the Base Bid of:

2. **Base Bid:** _____ (\$ _____)
(Words) (Figures)

In all locations sums shall be expressed in both words and figures. In case of discrepancy, written word governs.

3. **Addenda:** The Bidder acknowledges receipt of the following Addendum:

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____

4. **Alternates:** None

5. **Bid Security:** Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of 5 percent (5%) of the written Base Bid amount.

6. **Allowances:**

A. \$ N/A Allowance for unforeseen conditions for Plumbing Work at CTE.

7. **Time of Commencement and Completion:** The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in Specification Section 011200 Multiple Contract Summary and Specification Section 003113 Preliminary Schedules.

8. **Rejection of Bids:** The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

9. **Execution of Contract:** If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

10. **Signature:**

(Signature)

(Name – Printed)

(Title – Printed) (Date)

11. **Attachments:** Obtain and attach the following documents to each individual Bid.
 - a. Corporate Resolution
 - b. Non-Collusion Affidavit
 - c. Iran Divestment Act Affidavit
 - d. Bid Security
 - e. Subcontractor List
 - f. Substitution List

12. **Unit Costs:** N/A

END OF SECTION 004116.03

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SECTION 004116.04 - BID FORM CONTRACT NO. 04 – Electrical Contractor (EC-01)

Newburgh Enlarged City School District – New CTE Building

BIDDER INFORMATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: (____) _____

FACSIMILE: (____) _____

BID TO (Owner): Attention: Purchasing Agent
Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

PRIME CONTRACT: Contract No. 04 Electrical Contractor (EC-01)

PROJECT TITLE: Newburgh Enlarged City School District –
New CTE building (CTE)

SED Project Control No. *CTE Building SED#44-16-00-01-0-053-001*

CSArch PROJECT NO: 108-2303.00

1. **Representations:** By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement for the Base Bid of:

2. **Base Bid:** _____ (\$ _____)
(Words) (Figures)

In all locations sums shall be expressed in both words and figures. In case of discrepancy, written word governs.

3. **Addenda:** The Bidder acknowledges receipt of the following Addendum:

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____

4. **Alternates:** None.

5. **Bid Security:** Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of 5 percent (5%) of the written Base Bid amount.

6. **Allowances:**

A. N/A Allowance for unforeseen conditions for Electrical Work at CTE.

7. **Time of Commencement and Completion:** The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in Specification Section 011200 Multiple Contract Summary and Section 003113 Preliminary Schedules.

8. **Rejection of Bids:** The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

9. **Execution of Contract:** If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

10. **Signature:**

(Signature)

(Name – Printed)

(Title – Printed) (Date)

11. **Attachments:** Obtain and attach the following documents to each individual Bid.
 - a. Corporate Resolution
 - b. Non-Collusion Affidavit
 - c. Iran Divestment Act Affidavit
 - d. Bid Security
 - e. Subcontractor List
 - f. Substitution List

12. **Unit Costs:** N/A

END OF SECTION 004116.04

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SECTION 004116.05 - BID FORM CONTRACT NO. 05 – Fire Protection Contractor (FP-01)

Newburgh Enlarged City School District – New CTE Building

BIDDER INFORMATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

TELEPHONE: (_____) _____

FACSIMILE: (_____) _____

BID TO (Owner): Attention: Purchasing Agent
Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

PRIME CONTRACT: Contract No. NO. 05 – Fire Protection Contractor (FP-01)

PROJECT TITLE: Newburgh Enlarged City School District –
New CTE building (CTE)

SED Project Control No. *CTE Building SED#44-16-00-01-0-053-001*

CSArch PROJECT NO: 108-2303.00

1. **Representations:** By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement for the Base Bid of:

2. **Base Bid:** _____ (\$ _____)
(Words) (Figures)

In all locations sums shall be expressed in both words and figures. In case of discrepancy, written word governs.

3. **Addenda:** The Bidder acknowledges receipt of the following Addendum:

No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____
No. _____ Dated _____	No. _____ Dated _____

4. **Alternates:** None

5. **Bid Security:** Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of 5 percent (5%) of the written Base Bid amount.

6. **Allowances:**

A. \$N/A Allowance for unforeseen conditions for Fire Suppression Work at CTE.

7. **Time of Commencement and Completion:** The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in Specification Section 011200 Multiple Contract Summary and Specification Section 003113 Preliminary Schedules.

8. **Rejection of Bids:** The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

9. **Execution of Contract:** If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

10. **Signature:**

(Signature)

(Name – Printed)

(Title – Printed) (Date)

11. **Attachments:** Obtain and attach the following documents to each individual Bid.
 - a. Corporate Resolution
 - b. Non-Collusion Affidavit
 - c. Iran Divestment Act Affidavit
 - d. Bid Security
 - e. Subcontractor List
 - f. Substitution List

12. **Unit Costs:** N/A

END OF SECTION 004116.05

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 **AIA** Document A310™ – 2010**Bid Bond****CONTRACTOR:**

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

BOND AMOUNT: \$**PROJECT:**

(Name, location or address, and Project number, if any)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

ADDITIONS AND DELETIONS:

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This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such

Init.

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User Notes:

(1750231138)

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

Signed and sealed this day of ,

(Principal) *(Seal)*

(Witness)

(Title)

(Surety) *(Seal)*

(Witness)

(Title)

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END OF SECTION

SECTION 004333 - PROPOSED PRODUCTS FORM

PARTICULARS

1.1 The following is the List of Equipment referenced in the bid submitted by:

1.2 (Bidder) _____

1.3 TO (Owner): Newburgh Enlarged City School District

1.4 dated _____ and which is an integral part of the Bid Form.

IF BIDDER PROPOSES TO USE MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED, HE SHALL LIST BELOW ANY EQUIVALENTS HE PROPOSES TO USE.

MATERIALS AND EQUIPMENT NOT LISTED ON THIS SHEET AND NOT PROPOSED, AS EQUIVALENTS IN THE BID MAY NOT BE CONSIDERED, EVALUATED, OR ACCEPTED AS EQUIVALENTS AFTER THE BIDS ARE RECEIVED.

THIS IDENTIFICATION OF EQUIVALENT IS REQUIRED OF BIDDER(S) AS PART OF THE SUPPLEMENTARY BID FORMS AND IS IN PARTIAL FULFILLMENT OF REQUIREMENTS OF THE INSTRUCTIONS TO BIDDERS. EQUIVALENTS MAY AFFECT OWNER'S ACCEPTANCE OF THE BID AND DECISION TO AWARD CONTRACT. ADDITIONAL DATA ON EQUIVALENTS MAY BE REQUESTED FROM SELECTED BIDDER(S) AFTER THE BID OPENING IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS.

ADDITIONAL SHEETS WILL BE PROVIDED ON REQUEST:

	SPECIFICATION SECTION	SPECIFIED ITEM	PROPOSED EQUIVALENT
A.	_____	_____	_____
B.	_____	_____	_____
C.	_____	_____	_____
D.	_____	_____	_____
E.	_____	_____	_____
F.	_____	_____	_____

G. _____

H. _____

I. _____

END PROPOSED PRODUCTS FORM

END OF DOCUMENT 004336

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END OF SECTION

Contractor's Qualification Statement

(Paragraph deleted)

SUBMITTED BY: _____ **SUBMITTED TO:** _____
(Organization name and address.) (Organization name and address.)

NAME OF PROJECT:

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

TYPE OF WORK TYPICALLY PERFORMED

(Indicate the type of work your organization typically performs, such as general contracting, construction manager as constructor services, HVAC contracting, electrical contracting, plumbing contracting, or other.)

THIS CONTRACTOR'S QUALIFICATION STATEMENT INCLUDES THE FOLLOWING:

(Check all that apply.)

- Exhibit A – General Information
- Exhibit B – Financial and Performance Information
- Exhibit C – Project-Specific Information
- Exhibit D – Past Project Experience
- Exhibit E – Past Project Experience (Continued)

CONTRACTOR CERTIFICATION

The undersigned certifies under oath that the information provided in this Contractor's Qualification Statement is true and sufficiently complete so as not to be misleading.

**Organization's Authorized Representative
Signature**

Date

Printed Name and Title

NOTARY

State of:

County of:

Signed and sworn to before me this ____ day of _____

Notary Signature

My commission expires: _____

ADDITIONS AND DELETIONS:

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AIA[®] Document A305[™] – 2020 Exhibit A

General Information

This Exhibit is part of the Contractor's Qualification Statement, submitted by _____ and dated the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

§ A.1 ORGANIZATION

§ A.1.1 Name and Location

§ A.1.1.1 Identify the full legal name of your organization.

§ A.1.1.2 List all other names under which your organization currently does business and, for each name, identify jurisdictions in which it is registered to do business under that trade name.

§ A.1.1.3 List all prior names under which your organization has operated and, for each name, indicate the date range and jurisdiction in which it was used.

§ A.1.1.4 Identify the address of your organization's principal place of business and list all office locations out of which your organization conducts business. If your organization has multiple offices, you may attach an exhibit or refer to a website.

§ A.1.2 Legal Status

§ A.1.2.1 Identify the legal status under which your organization does business, such as sole proprietorship, partnership, corporation, limited liability corporation, joint venture, or other.

- .1 If your organization is a corporation, identify the state in which it is incorporated, the date of incorporation, and its four highest-ranking corporate officers and their titles, as applicable.
- .2 If your organization is a partnership, identify its partners and its date of organization.
- .3 If your organization is individually owned, identify its owner and date of organization.

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- .4** If the form of your organization is other than those listed above, describe it and identify its individual leaders:

§ A.1.2.2 Does your organization own, in whole or in part, any other construction-related businesses? If so, identify and describe those businesses and specify percentage of ownership.

§ A.1.3 Other Information

§ A.1.3.1 How many years has your organization been in business?

§ A.1.3.2 How many full-time employees work for your organization?

§ A.1.3.3 List your North American Industry Classification System (NAICS) codes and titles. Specify which is your primary NAICS code.

§ A.1.3.4 Indicate whether your organization is certified as a governmentally recognized special business class, such as a minority business enterprise, woman business enterprise, service disabled veteran owned small business, woman owned small business, small business in a HUBZone, or a small disadvantaged business in the 8(a) Business Development Program. For each, identify the certifying authority and indicate jurisdictions to which such certification applies.

§ A.2 EXPERIENCE

§ A.2.1 Complete Exhibit D to describe up to four projects, either completed or in progress, that are representative of your organization's experience and capabilities.

§ A.2.2 State your organization's total dollar value of work currently under contract.

§ A.2.3 Of the amount stated in Section A.2.2, state the dollar value of work that remains to be completed:

§ A.2.4 State your organization's average annual dollar value of construction work performed during the last five years.

§ A.3 CAPABILITIES

§ A.3.1 List the categories of work that your organization typically self-performs.

§ A.3.2 Identify qualities, accreditations, services, skills, or personnel that you believe differentiate your organization from others.

§ A.3.3 Does your organization provide design collaboration or pre-construction services? If so, describe those services.

§ A.3.4 Does your organization use building information modeling (BIM)? If so, describe how your organization uses BIM and identify BIM software that your organization regularly uses.

§ A.3.5 Does your organization use a project management information system? If so, identify that system.

§ A.4 REFERENCES

§ A.4.1 Identify three client references:

(Insert name, organization, and contact information)

§ A.4.2 Identify three architect references:

(Insert name, organization, and contact information)

§ A.4.3 Identify one bank reference:

(Insert name, organization, and contact information)

§ A.4.4 Identify three subcontractor or other trade references:

(Insert name, organization, and contact information)

AIA[®] Document A305™ – 2020 Exhibit B

Financial and Performance Information

This Exhibit is part of the Contractor's Qualification Statement, submitted by _____ and dated the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

§ B.1 FINANCIAL

§ B.1.1 Federal tax identification number:

§ B.1.2 Attach financial statements for the last three years prepared in accordance with Generally Accepted Accounting Principles, including your organization's latest balance sheet and income statement. Also, indicate the name and contact information of the firm that prepared each financial statement.

§ B.1.3 Has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, been the subject of any bankruptcy proceeding within the last ten years?

§ B.1.4 Identify your organization's preferred credit rating agency and identification information.

(Identify rating agency, such as Dun and Bradstreet or Equifax, and insert your organization's identification number or other method of searching your organization's credit rating with such agency.)

§ B.2 DISPUTES AND DISCIPLINARY ACTIONS

§ B.2.1 Are there any pending or outstanding judgments, arbitration proceedings, bond claims, or lawsuits against your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, or any of the individuals listed in Exhibit A, Section 1.2, in which the amount in dispute is more than \$75,000?

(If the answer is yes, provide an explanation.)

§ B.2.2 In the last five years has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management:

(If the answer to any of the questions below is yes, provide an explanation.)

.1 failed to complete work awarded to it?

.2 been terminated for any reason except for an owners' convenience?

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- .3 had any judgments, settlements, or awards pertaining to a construction project in which your organization was responsible for more than \$75,000?
- .4 filed any lawsuits or requested arbitration regarding a construction project?

§ B.2.3 In the last five years, has your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management; or any of the individuals listed in Exhibit A Section 1.2:

(If the answer to any of the questions below is yes, provide an explanation.)

- .1 been convicted of, or indicted for, a business-related crime?
- .2 had any business or professional license subjected to disciplinary action?
- .3 been penalized or fined by a state or federal environmental agency?



AIA® Document A305® – 2020 Exhibit C

Project Specific Information

This Exhibit is part of the Contractor’s Qualification Statement, submitted

by _____ and dated

the _____ day of _____ in the year
(In words, indicate day, month and year.)

PROJECT:

(Name and location or address.)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

CONTRACTOR'S PROJECT OFFICE:

(Identify the office out of which the contractor proposes to perform the work for the Project.)

TYPE OF WORK SOUGHT

(Indicate the type of work you are seeking for this Project, such as general contracting, construction manager as constructor, design-build, HVAC subcontracting, electrical subcontracting, plumbing subcontracting, etc.)

CONFLICT OF INTEREST

Describe any conflict of interest your organization, its parent, or a subsidiary, affiliate, or other entity having common ownership or management, or any of the individuals listed in Exhibit A Section 1.2, may have regarding this Project.

§ C.1 PERFORMANCE OF THE WORK

§ C.1.1 When was the Contractor’s Project Office established?

§ C.1.2 How many full-time field and office staff are respectively employed at the Contractor’s Project Office?

§ C.1.3 List the business license and contractor license or registration numbers for the Contractor’s Project Office that pertain to the Project.

ADDITIONS AND DELETIONS:

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§ C.1.4 Identify key personnel from your organization who will be meaningfully involved with work on this Project and indicate (1) their position on the Project team, (2) their office location, (3) their expertise and experience, and (4) projects similar to the Project on which they have worked.

§ C.1.5 Identify portions of work that you intend to self-perform on this Project.

§ C.1.6 To the extent known, list the subcontractors you intend to use for major portions of work on the Project.

§ C.2 EXPERIENCE RELATED TO THE PROJECT

§ C.2.1 Complete Exhibit D to describe up to four projects performed by the Contractor's Project Office, either completed or in progress, that are relevant to this Project, such as projects in a similar geographic area or of similar project type. If you have already completed Exhibit D, but want to provide further examples of projects that are relevant to this Project, you may complete Exhibit E.

§ C.2.2 State the total dollar value of work currently under contract at the Contractor's Project Office:

§ C.2.3 Of the amount stated in Section C.2.2, state the dollar value of work that remains to be completed:

§ C.2.4 State the average annual dollar value of construction work performed by the Contractor's Project Office during the last five years.

§ C.2.5 List the total number of projects the Contractor's Project Office has completed in the last five years and state the dollar value of the largest contract the Contractor's Project Office has completed during that time.

§ C.3 SAFETY PROGRAM AND RECORD

§ C.3.1 Does the Contractor's Project Office have a written safety program?

§ C.3.2 List all safety-related citations and penalties the Contractor's Project Office has received in the last three years.

§ C.3.3 Attach the Contractor's Project Office's OSHA 300a Summary of Work-Related Injuries and Illnesses form for the last three years.

§ C.3.4 Attach a copy of your insurance agent's verification letter for your organization's current workers' compensation experience modification rate and rates for the last three years.

§ C.4 INSURANCE

§ C.4.1 Attach current certificates of insurance for your commercial general liability policy, umbrella insurance policy, and professional liability insurance policy, if any. Identify deductibles or self-insured retentions for your commercial general liability policy.

§ C.4.2 If requested, will your organization be able to provide property insurance for the Project written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis?

(Paragraphs deleted)

§ C.5 SURETY

§ C.5.1 If requested, will your organization be able to provide a performance and payment bond for this Project?

§ C.5.2 Surety company name:

§ C.5.3 Surety agent name and contact information:

§ C.5.4 Total bonding capacity:

§ C.5.5 Available bonding capacity as of the date of this qualification statement:



AIA[®] Document A305[™] – 2020 Exhibit D

Contractor's Past Project Experience

	1	2	3	4
PROJECT NAME				
PROJECT LOCATION				
PROJECT TYPE				
OWNER				
ARCHITECT				
CONTRACTOR'S PROJECT EXECUTIVE				
KEY PERSONNEL (include titles)				
PROJECT DETAILS	Contract Amount Completion Date % Self-Performed Work			
PROJECT DELIVERY METHOD	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:
SUSTAINABILITY CERTIFICATIONS				



AIA[®] Document A305™ – 2020 Exhibit E

Contractor's Past Project Experience, Continued

	1	2	3	4
PROJECT NAME				
PROJECT LOCATION				
PROJECT TYPE				
OWNER				
ARCHITECT				
CONTRACTOR'S PROJECT EXECUTIVE				
KEY PERSONNEL (include titles)				
PROJECT DETAILS	Contract Amount Completion Date % Self-Performed Work			
PROJECT DELIVERY METHOD	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:	<input type="checkbox"/> Design-bid-build <input type="checkbox"/> Design-build <input type="checkbox"/> CM constructor <input type="checkbox"/> CM advisor <input type="checkbox"/> Other:
SUSTAINABILITY CERTIFICATIONS				

SECTION 004519 - CERTIFICATE OF NON-COLLUSION

The following provisions of the New York State General Municipal Law form a part of the Bidding Requirements:

NON-COLLUSIVE BIDDING CERTIFICATE

- (a) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, under penalty of perjury, that, to the best of his or her knowledge and belief:
- (1) The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.
 - (2) Unless otherwise required by law, the prices which have been quoted in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
 - (3) No attempt has been made or will be made by the Bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
- (b) A Bid shall not be considered for award nor shall any award be made where (a) (1), (2) and (3) above have not been complied with; provided, however, that if in any case the Bidder cannot make the foregoing certification, the Bidder shall so state and shall so furnish with the Bid, a signed statement which sets forth in detail the reasons therefore. Where (a) (1), (2) and (3) above have not been complied with, the Bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the Bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of subparagraph (a).

- (c) Any bid hereafter made to any political subdivision of the State or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

- (d) The person signing this Bid or Proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the Bidder as well to the person signing in his behalf.

Signature_____

Date_____

Title:_____ Federal ID NO.: _____

Business Address: _____

Telephone:_____ Facsimile:_____

END OF SECTION 004519

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DOCUMENT 004520 - IRAN DIVESTMENT ACT AFFIDAVIT

The following provisions of the New York State General Municipal Law form a part of the Bidding Requirements:

IRAN DIVESTMENT ACT CERTIFICATE

- (a) By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to its own organization, under penalty of perjury, that, to the best of his or her knowledge and belief:
- (1) That the Bidder is not on the list created pursuant to Paragraph (b) of Subdivision 3 of Section 165-a of the New York State finance law.
 - (2) By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, Bidder / Contractor (or any assignee) certifies that once the prohibited entities list is posted on the Office of General Services (OGS) website, it will not utilize on such Contract any subcontractor that is identified on the prohibited entities list; and
 - (3) Additionally, Bidder / Contractor is advised that once the list is posted on the OGS website, any Contractor seeking to renew or extend a Contract or assume the responsibility of a contract awarded in response to the solicitation, must certify at the time the Contract is renewed, extended or assigned that it is not included on the prohibited entities list.
- (b) A bid shall not be considered for award nor shall any award be made where the condition set forth in paragraph a of this subdivision has not been complied with; provided, however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. A political subdivision may award a bid to a bidder who cannot make the certification pursuant to paragraph (a) of this subdivision on a case-by-case basis if:
- (1) The investment activities in Iran were made before the effective date of this section, the investment activities in Iran have not been expanded or renewed after the effective date of this section, and the person has adopted, publicized, and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
 - (2) The political subdivision makes a determination that the goods or services are necessary for the political subdivision to perform its functions and that, absent such an exemption, the political subdivision would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.

- (c) Any bid hereafter made to any political subdivision of the State or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in subdivision one of this section, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-engagement in investment activities in Iran as the act and deed of the corporation.

- (d) The person signing this Bid or Proposal certifies that he has fully informed himself regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the Bidder as well to the person signing in his behalf.

Signature _____

Date _____

Title _____ Federal ID No.: _____

Business Address: _____

Telephone: _____ Email: _____

INCLUDE WITH BID FORM(S) IF BIDDER IS A PARTNERSHIP:

(Print or type name of firm)

BY: _____
(Signature of general partner)

(Print or type general partner's name and title)

(Business Address)

Business Phone

Facsimile

Corporate Seal

AIA® Document A132® – 2019

Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition

AGREEMENT made as of the _____ day of _____ in the year two thousand twenty-four.
(In words, indicate day, month, and year.)

BETWEEN the Owner:
(Name, legal status, address, and other information)

Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

and the Contractor:
(Name, legal status, address, and other information)

for the following Project:
(Name, location, and detailed description)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

The Construction Manager:
(Name, legal status, address, and other information)

Jacobs Project Management Co.
One Penn Plaza, 24th Floor, Suite 24000
New York, New York 10119

The Architect:
(Name, legal status, address, and other information)

Collins+Scoville Architecture | Engineering | Construction Management, D.P.C.
dba CSArch
19 Front Street
Newburgh, New York 12550-7601

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser. AIA Document A232™–2019 is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

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User Notes:

(1700090165)

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS
(Paragraph deleted)

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion of the Project or Portions Thereof

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the date of Substantial Completion of the Work of all of the Contractors for the Project will be:

(Insert the date of Substantial Completion of the Work of all Contractors for the Project.)

Init.

(Paragraph deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraph deleted)

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be one of the following:
(Check the appropriate box.)

- [X] Stipulated Sum, in accordance with Section 4.2 below
- [] Cost of the Work plus the Contractor’s Fee, in accordance with Section 4.3 below
- [] Cost of the Work plus the Contractor’s Fee with a Guaranteed Maximum Price, in accordance with Section 4.4 below

(Based on the selection above, complete Section 4.2, 4.3 or 4.4 below.)

§ 4.2 Stipulated Sum

§ 4.2.1 The Contract Sum shall be dollars and cents (\$00.00), subject to additions and deductions as provided in the Contract Documents.

§ 4.2.2 Alternates

§ 4.2.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
------	-------

§ 4.2.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.2.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price
------	-------

§ 4.2.4 Unit prices, if any:

(Identify the item and state the unit price, and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)
(Paragraphs deleted)
(Table deleted)

(Paragraphs deleted)

(Table deleted)

(Paragraphs deleted)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Construction Manager by the Contractor, and Certificates for Payment issued by the Construction Manager and Architect, the Owner shall make progress payments on account of the Contract Sum, to the Contractor, as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

Per section 012900 of the Project Manual.

§ 5.1.3 Provided that an Application for Payment is received by the Construction Manager not later than the 27th day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the last day of the following month. If an Application for Payment is received by the Construction Manager after the application date fixed above, payment of the amount certified shall be made by the Owner not later than forty-five (45) days after the Construction Manager receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Progress Payments Where the Contract Sum is Based on a Stipulated Sum

§ 5.1.4.1 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Construction Manager and Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.4.2 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.4.3 In accordance with AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.4.3.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.4.3.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A232–2019;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A232–2019; and
- .5 Retainage withheld pursuant to Section 5.1.7.

(Paragraphs deleted)

Init.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to when the Work of this Contract is substantially complete, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Five Percent (5%)

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to when the entire Work of this Contract is substantially complete, including modifications for completion of portions of the Work as provided in Section 3.4.2, insert provisions for such modifications.)

At the discretion of the Owner.

(Paragraphs deleted)

§ 5.2 Final Payment

§ 5.2.1 Final Payment Where the Contract Sum is Based on a Stipulated Sum

§ 5.2.1.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A232–2019, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment or Project Certificate for Payment has been issued by the Architect.

§ 5.2.1.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the final Certificate for Payment or Project Certificate for Payment, or as follows:

(Paragraphs deleted)

§ 5.3 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

Zero % 0

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as Initial Decision Maker pursuant to Article 15 of AIA Document A232–2019, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A232–2019, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

Arbitration pursuant to Article 15 of AIA Document A232–2019.

Litigation in courts located in Orange County, New York.

Other: *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 Where the Contract Sum is a Stipulated Sum

§ 7.1.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A232–2019.

(Paragraphs deleted)

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A232–2019 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550
Lori Gonzalez, Project Manager

§ 8.3 The Contractor’s representative:

(Name, address, email address, and other information)

§ 8.4 Neither the Owner’s nor the Contractor’s representative shall be changed without ten days’ prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A232™–2019, General Conditions of the Contract, Construction Manager as Adviser Edition and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A132™–2019, Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A232–2019, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

Init.

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Relationship of the Parties

Where the Contract is based on the Cost of the Work plus the Contractor’s Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor’s skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner’s interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

§ 8.8 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition
- .2 AIA Document A232™–2019, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

(Paragraphs deleted)

- .5 Drawings

Number	Title	Date
	Exhibit B Drawing List, which is attached hereto and incorporated herein	

- .6 Specifications

Section	Title	Date	Pages
	Exhibit A Table of Contents which is attached hereto and incorporated herein.		

- .7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

AIA Document A132™–2019, Exhibit B, Determination of the Cost of the Work

AIA Document E235™–2019, Sustainable Projects Exhibit, Construction Manager as Adviser Edition, dated as indicated below:

(Insert the date of the E235–2019 incorporated into this Agreement.)

Init.

[] The Sustainability Plan:

Title	Date	Pages
-------	------	-------

[] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A232-2019 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

Exhibit C – Prevailing Rate of Wages Specification 007343 outlining responsibility and instructions to obtain the Prevailing Wage Schedule and respective updates.
Execution of this Agreement acknowledges the receipt of these Exhibits and access to this information hereto.

This Agreement is entered into as of the day and year first written above.

OWNER *(Signature)*

Newburgh Enlarged City School District
Dr. Jackielyn Manning Campbell, Superintendent

(Printed name and title)

CONTRACTOR *(Signature)*

(Printed name and title)

Init.

AIA[®] Document A312[®] – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

CONSTRUCTION CONTRACT

Date:

Amount: \$

(Row deleted)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 18

CONTRACTOR AS PRINCIPAL

Company: _____
(Corporate Seal)

SURETY

Company: _____
(Corporate Seal)

Signature: _____

Name and

Title:

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Payment Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:**OWNER'S REPRESENTATIVE:**

(Architect, Engineer or other party:)
Collins+Scoville Architecture |
Engineering | Construction
Management, D.P.C.
dba CSArch
19 Front Street

Init.

AIA Document A312 – 2010 Payment Bond. Copyright © 2010. All rights reserved. "The American Institute of Architects," "American Institute of Architects," "AIA," the AIA Logo, and "AIA Contract Documents" are trademarks of The American Institute of Architects. This document was produced at 10:55:09 ET on 01/26/2024 under Order No.3104238697 which expires on 06/11/2024, is not for resale, is licensed for one-time use only, and may only be used in accordance with the AIA Contract Documents[®] Terms of Service. To report copyright violations, e-mail docinfo@aiacontracts.com.

User Notes:

(1966229357)

(Row deleted)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of

the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

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

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

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

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

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

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

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

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

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company: _____ (Corporate Seal)

Company: _____ (Corporate Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

Address: _____

Address: _____

 **AIA** Document A312[®] – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

CONSTRUCTION CONTRACT

Date:

Amount: \$

Description:

(Name and location)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and

Title:

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Performance Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)
Collins+Scoville Architecture |
Engineering | Construction
Management, D.P.C.
dba CSArch
19 Front Street

(Row deleted)

§ 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 Section 3.

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

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .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 Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 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 Owner's 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 Section 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:

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

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .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 Section 5; and
- .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 Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

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

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

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

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

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

§ 14 Definitions

§ 14.1 Balance of the Contract Price. The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

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

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

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

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

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

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

SURETY

Company: _____ *(Corporate Seal)*

Company: _____ *(Corporate Seal)*

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

Address: _____

Address: _____

AIA[®] Document C106™ – 2013

Digital Data Licensing Agreement

AGREEMENT made as of the _____ day of _____ in the year two-thousand twenty-three
(In words, indicate day, month and year.)

BETWEEN the Party transmitting Digital Data ("Transmitting Party"):
(Name, address and contact information, including electronic addresses)

Collins+Scoville Architecture | Engineering | Construction Management D.P.C.
dba CSArch
19 Front Street
Newburgh, New York 12550-7601

and the Party receiving the Digital Data ("Receiving Party"):
(Name, address and contact information, including electronic addresses)

for the following Project:
(Name and location or address)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001
CSArch Project #108-2303

The Transmitting Party and Receiving Party agree as follows.

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 TRANSMISSION OF DIGITAL DATA
- 3 LICENSE CONDITIONS
- 4 LICENSING FEE OR OTHER COMPENSATION
- 5 DIGITAL DATA

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 The purpose of this Agreement is to grant a license from the Transmitting Party to the Receiving Party for the Receiving Party's use of Digital Data on the Project, and to set forth the license terms.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

§ 1.2 This Agreement is the entire and integrated agreement between the parties. Except as specifically set forth herein, this Agreement does not create any other contractual relationship between the parties.

§ 1.3 For purposes of this Agreement, the term Digital Data is defined to include only those items identified in Article 5 below.

§ 1.3.1 Confidential Digital Data is defined as Digital Data containing confidential or business proprietary information that the Transmitting Party designates and clearly marks as "confidential."

ARTICLE 2 TRANSMISSION OF DIGITAL DATA

§ 2.1 The Transmitting Party grants to the Receiving Party a nonexclusive limited license to use the Digital Data identified in Article 5 solely and exclusively to perform services for, or construction of, the Project in accordance with the terms and conditions set forth in this Agreement.

§ 2.2 The transmission of Digital Data constitutes a warranty by the Transmitting Party to the Receiving Party that the Transmitting Party is the copyright owner of the Digital Data, or otherwise has permission to transmit the Digital Data to the Receiving Party for its use on the Project in accordance with the terms and conditions of this Agreement.

§ 2.3 If the Transmitting Party transmits Confidential Digital Data, the transmission of such Confidential Digital Data constitutes a warranty to the Receiving Party that the Transmitting Party is authorized to transmit the Confidential Digital Data. If the Receiving Party receives Confidential Digital Data, the Receiving Party shall keep the Confidential Digital Data strictly confidential and shall not disclose it to any other person or entity except as set forth in Section 2.3.1.

§ 2.3.1 The Receiving Party may disclose the Confidential Digital Data as required by law or court order, including a subpoena or other form of compulsory legal process issued by a court or governmental entity. The Receiving Party may also disclose the Confidential Digital Data to its employees, consultants or contractors in order to perform services or work solely and exclusively for the Project, provided those employees, consultants and contractors are subject to the restrictions on the disclosure and use of Confidential Digital Data as set forth in this Agreement.

§ 2.4 The Transmitting Party retains its rights in the Digital Data. By transmitting the Digital Data, the Transmitting Party does not grant to the Receiving Party an assignment of those rights; nor does the Transmitting Party convey to the Receiving Party any right in the software used to generate the Digital Data.

§ 2.5 To the fullest extent permitted by law, the Receiving Party shall indemnify and defend the Transmitting Party from and against all claims arising from or related to the Receiving Party's modification to, or unlicensed use of, the Digital Data.

ARTICLE 3 LICENSE CONDITIONS

The parties agree to the following conditions on the limited license granted in Section 2.1:

(State below rights or restrictions applicable to the Receiving Party's use of the Digital Data, requirements for data format, transmission method or other conditions on data to be transmitted.)

Revit and/or AutoCAD files will be provided as an accommodation at your request. Due to the nature of electronic data files, the Transmittal Party does not guarantee that the information in these files is identical to the bidding documents. Bid addenda may not have been incorporated into these files. If there are any discrepancies, the bidding documents and subsequent addenda constitute the contract requirements.

The Receiving Party agrees to transmit to the Transmitting Party at the end of the term of this agreement the Revit model including any information added by the Receiving Party.

ARTICLE 4 LICENSING FEE OR OTHER COMPENSATION

The Receiving Party agrees to pay the Transmitting Party the following fee or other compensation for the Receiving Party's use of the Digital Data:

(State the fee, in dollars, or other method by which the Receiving Party will compensate the Transmitting Party for the Receiving Party's use of the Digital Data.)

N/A

ARTICLE 5 DIGITAL DATA

The Parties agree that the following items constitute the Digital Data subject to the license granted in Section 2.1: *(Identify below, in detail, the information created or stored in digital form the parties intend to be subject to this Agreement.)*

Revit model
AutoCAD plans

This Agreement is entered into as of the day and year first written above and will terminate upon Substantial Completion of the Project, as that term is defined in AIA Document A201™–2007, General Conditions of the Contract for Construction, unless otherwise agreed by the parties and set forth below. *(Indicate when this Agreement will terminate, if other than the date of Substantial Completion.)*

TRANSMITTING PARTY *(Signature)*

RECEIVING PARTY *(Signature)*

(Printed name and title)

(Printed name and title)

4



AIA

Document G732 – 2019

Application and Certificate for Payment, Construction Manager as Adviser Edition

TO OWNER: Newburgh Enlarged CSD **PROJECT:** Newburgh ECSD - New Career and Technical Education (CTE)

Distribution to:

124 Grand Street
Newburgh, New York
12550

Building

PERIOD TO:

OWNER:
 CONSTRUCTION MANAGER:
 ARCHITECT:

FROM CONTRACTOR: VIA CONSTRUCTION MANAGER: Jacobs Project Management

CONTRACT DATE: PROJECT NOS: 108 / 2303 /

CONTRACTOR:
 FIELD:
 OTHER :

CONTRACT FOR: VIA ARCHITECT: CSArch

CONTRACTORS APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703™, Continuation Sheet, is attached.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and 0.00 payments received from the Owner, and that current payment shown herein is now due.

1. ORIGINAL CONTRACT SUM

0.00 By: _____

2. NET CHANGES IN THE WORK

0.00 CONTRACTOR:

3. CONTRACT SUM TO DATE (Line 1 ± 2)

0.00 State of: _____

4. TOTAL COMPLETED AND STORED TO DATE (Column G on G703)

0.00 County of: _____

5. RETAINAGE:

a. 0 % of Completed Work

0.00

Subscribed and sworn to before me this _____ day of _____

b. 0 % of Stored Material

0.00

Notary Public: _____
My Commission expires: _____

Total Retainage (Lines 5a + 5b or Total in Column I of G703)

0.00

6. TOTAL EARNED LESS RETAINAGE

0.00

(Line 4 minus Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT

0.00

(Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE

0.00

9. BALANCE TO FINISH, INCLUDING RETAINAGE

(Line 3 minus Line 6)

0.00

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER: _____

By: _____ Date: _____

ARCHITECT: (NOTE: If multiple Contractors are responsible for performing portions of the Project, the Architect's Certification is not required.) _____

By: _____ Date: _____

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	0.00	0.00
Total approved this month including Construction Change Directives	0.00	0.00
TOTALS	0.00	0.00
NET CHANGES IN THE WORK	0.00	0.00

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

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AIA Document G706[®] – 1994

Contractor's Affidavit of Payment of Debts and Claims

PROJECT: *(Name and address)*
Newburgh Enlarged City School
District
New Career and Technical
Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001

ARCHITECT'S PROJECT NUMBER:
108-2303

OWNER:
ARCHITECT:
CONTRACTOR:
SURETY:
OTHER:

TO OWNER: *(Name and address)*
Newburgh Enlarged City School
District
124 Grand Street
Newburgh, New York 12550

CONTRACT FOR:
CONTRACT DATED:

STATE OF: New York
COUNTY OF:

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose
Indicate Attachment Yes No

CONTRACTOR: *(Name and address)*

BY: _____
(Signature of authorized representative)

The following supporting documents should be attached hereto if required by the Owner:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
3. Contractor's Affidavit of Release of Liens (AIA Document G706A).

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:
My Commission Expires:



AIA® Document G706®A – 1994

Contractor's Affidavit of Release of Liens

PROJECT: *(Name and address)*
Newburgh Enlarged City School
District
New Career and Technical Education
(CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001

ARCHITECT'S PROJECT NUMBER:
108-2303

OWNER:
ARCHITECT:
CONTRACTOR:
SURETY:
OTHER:

TO OWNER: *(Name and address)*
Newburgh Enlarged City School
District
124 Grand Street
Newburgh, New York 12550

CONTRACT FOR:
CONTRACT DATED:

STATE OF: New York
COUNTY OF:

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS:

SUPPORTING DOCUMENTS ATTACHED HERETO:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

CONTRACTOR: *(Name and address)*

BY:

(Signature of authorized representative)

(Printed name and title)

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:



AIA® Document G707™ – 1994

Consent Of Surety to Final Payment

PROJECT: *(Name and address)*
Newburgh Enlarged City School District
New Career and Technical Education
(CTE) Building
22 West Street
Newburgh, New York 12550
SED#44-16-00-01-0-053-001

ARCHITECT'S PROJECT NUMBER: 108-2303

OWNER:

ARCHITECT:

CONTRACTOR:

SURETY:

OTHER:

CONTRACT FOR:

TO OWNER: *(Name and address)*
Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

CONTRACT DATED:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the
(Insert name and address of Surety)

on bond of
(Insert name and address of Contractor)

, SURETY,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of any of
its obligations to
(Insert name and address of Owner)

, CONTRACTOR,

as set forth in said Surety's bond.

, OWNER,

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:
(Insert in writing the month followed by the numeric date and year.)

(Surety)

(Signature of authorized representative)

Attest:
(Seal):

(Printed name and title)

AIA® Document A232® – 2019

General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

for the following PROJECT:

(Name, and location or address)

Newburgh Enlarged City School District
New Career and Technical Education (CTE) Building
22 West Street
Newburgh, New York 12550
SED# 44-16-00-01-0-053-001
CSArch Project #108-2303

THE CONSTRUCTION MANAGER:

(Name, legal status, and address)

Jacobs Project Management Co.
One Penn Plaza, 24th Floor, Suite 24000
New York, New York 10119

THE OWNER:

(Name, legal status, and address)

Newburgh Enlarged City School District
124 Grand Street
Newburgh, New York 12550

THE ARCHITECT:

(Name, legal status, and address)

Collins+Scoville Architecture | Engineering | Construction Management, D.P.C.
dba CSArch
19 Front Street
Newburgh, New York 12550

The purpose of the "redline" revisions in this document are to amend, supplement and/or void portions of the AIA standard form document. Strikethrough shall indicate deletion and severing of language from the AIA standard form document, and underline shall indicate addition to the AIA standard form document. The final contract which will be prepared from this "redline" form may finalize the document to affect such revisions without showing "redline".

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A132™–2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™–2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™–2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

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- 1 GENERAL PROVISIONS**
- 2 OWNER**
- 3 CONTRACTOR**
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- 13 MISCELLANEOUS PROVISIONS**
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT**
- 15 CLAIMS AND DISPUTES**

Init.

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The "Contract Documents". The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions, Project Labor Agreement), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A "Modification" is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect.

§ 1.1.2 The "Contract". The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification in a written instrument signed by Owner, or Architect in the case of a written order for a minor change in the Work. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. No obligation of the Construction Manager and/or Architect to the Owner, whether expressed by agreement or implied by law, shall be construed as intended for the benefit of the Contractor. Nothing in the Contract Documents nor in any aspect of the Construction Manager and/or Architect's relationship with the Owner shall create or give rise to any duty whatsoever on the part of the Construction Manager and/or Architect to the Contractor. The term "Contractor" in this paragraph shall include the Contractor, its officers, employees, agents, contractees and Subcontractors of any tier.

§ 1.1.3 The "Work". The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project. The Work included is general and in no way limits or qualifies the Contract requirements.

§ 1.1.4 The "Project". The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other "Multiple Prime Contractors", and by the Owner's own forces including persons or entities under separate contracts not administered by the Construction Manager.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The "Drawings". The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.8 The "Specifications". The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

The Specifications may describe (or the Drawings may show) the general placement required of materials or equipment, but the actual required placement may vary depending on the specific material or equipment used by the Contractor or the existing field conditions. The Contractor shall bear all direct and indirect costs associated with such variations.

Some Specifications may be written in a condensed outline form and omitted words shall be included by interference. If the Specifications identify a task, it shall mean the "Contractor shall furnish, install and complete" the identified task unless otherwise stated.

Reference to standard specifications, manuals or codes shall mean reference to the latest standard specification, manual or code in effect at the time of the execution of the Owner-Contractor Agreement, unless otherwise stated. When reference is made to a manufacturer, trade association, reference standard or similar source (such as ASTM, ASA, AISC, ACI, etc.) the standards or requirements of such entity shall be incorporated into the Specifications and have the force and effect as though they were set forth expressly. Upon entering into the Owner-Contractor Agreement, the Contractor acknowledges its familiarity with those references, codes, etc. The date of the referenced standard shall be the latest edition in effect at the time of the execution of the Owner-Contractor Agreement unless otherwise stated.

§ 1.1.9 "Instruments of Service". Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.10 "Project Manual". The Project Manual is the volume assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

§ 1.1.11 Approved. When the words "approved," "satisfactory," "proper," or "as directed" are used, acceptance by the Architect shall be understood.

§ 1.1.12 Provide. When the term "provide" (including derivatives thereof) is used. It shall mean to properly fabricate, complete, transport, deliver, install, erect, construct, test and furnish all labor, materials, equipment, apparatus, appurtenances, and all items and expenses necessary to properly complete in place ready for operation or use under the terms of the Specifications.

§ 1.1.13 Addenda. Addenda are changes to the Contract Documents in written or graphic form issued by Architect with Owner's approval prior to the execution of the Agreement and specifically listed in the Agreement. Addenda interpret the bid documents, including the Drawings and Specifications, by additions, deletions, clarification, corrections, or supplementary information.

§ 1.1.14 Bulletins. Bulletins are written or graphic instruments issued by the Architect after the execution of the Contract which request a proposal from the Contractor that, if accepted by the Owner, will cause the execution of a Change Order to modify the Contract Documents.

§ 1.1.15 Knowledge. The terms "Knowledge," "Recognize" and "Discover", and their respective derivatives and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows or should know, recognizes or should recognize and discovers or should discover in exercising the care, skill, and diligence required by the Contract Documents. Analogously, the expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Project and exercising the care, skill and diligence required of the Contractor by the Contract Documents.

§ 1.1.16 Furnish. "Furnish" shall mean purchase and/or fabricate and deliver to the job site or other location when so designated.

§ 1.1.17 Install. "Install" shall mean build-in, mount in position, connect or apply the specified object(s) and, where applicable, adjust and start-in operation.

§ 1.1.18 Contractor. Where the word "Contractor" is used in the Contract Documents, it refers to all Prime Contractors.

§ 1.1.19 Alternate. "Alternate" means a variation in the Contract requirements on which a separate price is to be received by the Owner as part of the bid. If the Alternate is accepted in writing by the Owner, the variation is then a

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part of the Contract and the amount of money quoted to be added to or deleted from the Base Bid is taken into account in determining the Contract Sum.

§ 1.1.20 Owner's Representative. The term "Owner's Representative" means the Owner's employee(s), designated by the Owner to oversee the Project on behalf of the Owner.

§ 1.1.21 Construction Manager. The term "Construction Manager" refers to any firm, entity or individual (or any successor firm, entity or individual) retainer by the Owner to manage the Project on behalf of the Owner.

§ 1.1.22 Project Labor Agreement. "Project Labor Agreement" refers to a pre-hire collective bargaining agreement between a Contractor and a building and construction trade labor organization establishing the labor organization as the collective bargaining representative for all person who will perform work on a public works project, and which provides that only contractors and subcontractors who provide a signed Letter of Assent agreeing to be bound by the Project Labor Agreement.

§ 1.1.23 Nothing in the Contract Documents shall relieve Contractor from its requirement to comply with all applicable statutory requirements and other governmental or quasi-governmental codes, rules and regulations, including, without limitation, those contained in New York State Education Law §3813.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. Items not expressly included in the Contract Documents, but which are reasonably inferable therefrom as being necessary to produce the intended results shall be deemed included in the Work. The Contract Documents are complimentary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. Contractor acknowledges and agrees that the Contract Documents are adequate and sufficient to provide for the completion of the Work, and include all Work, whether or not shown or described, which may be inferred to be required or useful for the completion of the Work in accordance with all applicable federal, state, and local statutes, laws, codes, rules, regulations, requirements, and lawful orders of public authorities in effect during the term of the Contract and applicable to the Work. Without limitation, the Work includes all labor, materials, equipment and services necessary to satisfy all governmental conditions including but not limited to obtaining permits. Unless otherwise set forth herein, in the event that there is a conflict, discrepancy, ambiguity, and/or unclear circumstances between or among any terms, conditions, or requirements of the Contract Documents, those that provide for the most inclusive, highest quality, highest quantity, highest cost, and/or most stringent requirements and/or obligations on the part of the Contractor in accordance with the Architect's interpretation shall apply and be provided or performed by Contractor at no extra compensation to Contractor and/or no extension of the Contract Time. The Contractor herewith agrees that no extra compensation shall be awarded to him, since he herewith received specific instructions as to the procedure and values of the Work

(Paragraph deleted)

§ 1.2.1.2 Whenever any additional materials and/or workmanship not shown or specified are required to complete the Work of the Contract Documents in accordance with the intent thereof, the Contractor shall provide these materials and workmanship at no additional cost to the Owner.

§ 1.2.2 Execution of the Contract by the Contractor is a representation that the Contractor has carefully examined the Contract Documents (including the Project Labor Agreement), and the site, and represents that the Contractor is thoroughly familiar with the nature and location of the Work, the site and all improvements thereon, the specific conditions under which the Work is to be performed, and all matters which may in any way affect the Work or its performance. The Contractor further represents that as a result of such examinations and investigations, the Contractor thoroughly understands the Contract Documents and their intent and purpose, and is familiar with all applicable codes, ordinances, laws, regulations, and rules as they apply to the Work, and that the Contractor will abide by same. Claims for additional time or additional compensation as a result of the Contractor's failure to follow the foregoing procedure and to familiarize itself with all local conditions and the Contract Documents will not be permitted. The Contractor shall also review accessibility and general character of the site or building(s), the extent of existing work within or adjacent to the site, and any other work being performed thereon at the time of submission of his bid.

§ 1.2.2.1 The Specifications may be generally divided into trade sections, and, if so, it is for the purpose of convenience and ready reference only. The Contractor will be permitted to allot the work of Subcontractors at his own discretion regardless of the groupings in the Specifications. It shall be the Contractor's responsibility to settle definitely with each Subcontractor the portions of the Work which each will be required to perform and the Owner (including the Owner's Representative), Construction Manager and Architect assume no responsibility whatsoever for any jurisdiction claimed by any of the trades/Subcontractors involved in the Work. The Contractor shall, subject to the other terms of the Contract Documents, provide each item listed, of quality noted and subject to qualifications noted, and shall perform operations prescribed according to the conditions stated, furnishing therefore all necessary labor, materials, equipment and incidentals required to complete the Work. Contractor represents that the Subcontractors, manufacturers and suppliers engaged or to be engaged by it are and will be familiar with the requirements for performance by them of their obligations.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. mechanical and electrical systems, or to complete otherwise incomplete construction or to meet governing code requirements, they shall be included by the Contractor, unless he sought and received contradictory interpretation or clarification from the Architect.

§ 1.2.4 The Contractor shall provide all labor, materials, equipment, appliances and services necessary to execute and complete all work as required by the Contract Documents and the applicable Building Codes. Contractors shall conduct pre-construction surveys and provide photo/videos of any existing damage in areas where new construction is to take place prior to the start of work. A copy of such documentation shall be provided to the owner's representative.

§ 1.2.4.1 The Contractor and each Subcontractor shall evaluate and satisfy themselves with the conditions at the site and limitations under which the Work is to be performed including, without limitation, (1) the location, condition, layout and nature of the Project site and surrounding areas, (2) generally prevailing climatic conditions, (3) anticipated labor supply and costs, (4) availability and cost of materials, tools and equipment, (5) any time restrictions for accessing or working at the site, (6) the storage, handling and trucking of materials to be used on-site, and (7) all other matters as may be incidental to the work under the Contract, before and after delivery of the bid proposal.

§ 1.2.4.2 The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or Contract Time in connection with any failure by the Contractor or any Subcontractor to comply with the requirements of this Paragraph 1.2.

§ 1.2.4.3 Contractor represents and warrants that its investigation of the site was performed in detail and was sufficient to disclose the condition of the Project Site and all improvements thereon, and the conditions under which the Work is to be performed, including, without limitation (i) the location, condition, layout and nature of the Project Site and surrounding areas; (ii) anticipated labor supply costs; (iii) availability and cost of materials, tools, and equipment; and (iv) other similar issues pertinent to the performance of the Work.

§ 1.2.4.4 The Contractor shall be responsible to remove and/or relocate all items which interfere with the new construction and shall correct all visible code violations at no additional cost to the Owner. Such violations shall include, but not be limited to, electrical panel wires, firestopping at fire-rated partitions.

§ 1.2.5 If the Contract Documents are not in concurrence regarding the quantity or quality of products, the Contractor shall request interpretation from the Architect. The Architect's interpretations shall be based on the following criteria:

- .1 Specifications shall determine quality.
- .2 Drawings shall determine quantity.
- .3 Large scale details shall govern over smaller scale details.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.4.1 The Contractor represents that prior to execution of the Contract, it has consulted with an attorney, that the attorney has reviewed all of the Contract Documents and that the Contractor has signed the Contract Documents only after such consultation with its attorney. Accordingly, the maxim that this Contract shall be construed against the Party who drafted it shall not apply to the interpretation of this Contract or any of the Contract Documents.

§ 1.4.2 Severability. In the event that any term or provision, or part thereof, of this Contract or any of the Contract Documents is held to be illegal, invalid or unenforceable under applicable law by a court of competent jurisdiction, such term or provision, or part thereof, shall be deemed ineffective to the extent of such invalidity or unenforceability only and severed from the Contract Documents and the remaining term(s) and provision(s) shall remain unaffected thereby.

§ 1.4.3 Captions. Titles or captions of Articles, Sections, and Exhibits contained in the Contract Documents are inserted only as a matter of convenience and for reference, and in no way define, limit, extend or describe the scope of the Contract Documents or the intent of any provision hereof.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights, except to the extent set forth in the Owner-Architect Contract. The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

(Paragraphs deleted)

§ 1.5.3 Notwithstanding the preceding sections 1.5.1 and 1.5.2, nothing contained this Section 1.5 or elsewhere in the Contract Documents shall modify the rights granted to Owner by Architect in relation to the Instruments of Service as set forth in the separate agreement between Owner and Architect.

§ 1.6 References to trade publications, industries, and published standards shall carry the latest date, including latest revisions, unless dated to the contrary. Further, all work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such Work is to be done by others. All work shall conform to the National Electric Code, the National Board of Fire Underwriters and applicable City, Town and State Building Codes and Authorities having jurisdiction.

§ 1.7 The Contractor and all Subcontractors shall refer to all of the Drawings, including those showing primarily the work of the plumbing, heating, ventilation, air conditioning, electrical, and other specialized trades, and to all of the sections of the Specifications, and shall perform all work reasonably inferable therefrom as being necessary to produce the indicated results.

§ 1.8 All indications or notations on the drawings which apply to one of a number of similar situations, materials, or processes shall be deemed to apply to all such situations, materials, or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents.

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§ 1.9 The general character of the detailed work is shown on the drawings, but minor modifications may be made on the full size drawings. Any details shall be worked out in relation to their location and their connection to other parts of the work. Where details or conditions are indicated in summary form, such details or conditions shall be continued throughout the course or parts in which they occur. The Contractor shall be responsible for the complete and correct application of such details throughout the portions of the project in which they occur.

§ 1.10 Should the Architect's written interpretations, in the opinion of the contractor, show additional work, or work of more expensive character than that shown or inferred by the Contract Drawings, it shall be the duty of the Contractor to so notify the Architect through the Construction Manager within five (5) days from receipt of same in order that proper adjustment may be made if found justifiable in the opinion of the Architect and the Owner. The Contractor shall assume full responsibility for all such work done without the approval of the Architect, the Construction Manager, and the Owner.

§ 1.11 Confidentiality

§ 1.11.1 The Contractor warrants and represents that the Contractor shall not knowingly or negligently communicate or disclose at any time to any person or entity any information in connection with the Work or the Project, except: (1) with prior written consent of the Owner, (2) information that was in the public domain prior to the date of this Agreement, (3) information which becomes part of the public domain by publication or otherwise not due to any unauthorized act or omission of the Contractor, (4) as may be required to perform the Work or by any applicable law, or (5) for purposes of coordination with other prime contractors.

§ 1.11.2 The Contractor, any time upon request of the Owner, shall immediately return and surrender to the Owner all copies of any materials, records, notices, memoranda, recordings, drawings, specifications, and mock-ups and any other documents furnished by the Owner of the Architect to the Contractor.

§ 1.11.3 The Contractor shall specifically cause all Subcontractors or any other person or entity performing any services or furnishing any materials or equipment of the Work to warrant and represent all items set forth in this Paragraph 1.6.

§ 1.11.4 The representations and warranties contained in this Paragraph 1.11 shall survive the complete performance of the Work or earlier termination of this Agreement.

§ 1.12 Project Labor Agreement

§ 1.12.1 THIS PROJECT IS SUBJECT TO A PROJECT LABOR AGREEMENT COVERING CONSTRUCTION OF CONSTRUCTION PROJECTS, NEWBURGH ENLARGED CITY SCHOOL DISTRICT EFFECTIVE FEBRUARY 1, 2021, BETWEEN NEWBURGH ENLARGED CITY SCHOOL DISTRICT, THE HUDSON VALLEY BUILDING AND CONSTRUCTION TRADES COUNCIL ON BEHALF OF ITSELF AND ITS AFFILIATED LOCAL UNIONS, AND SIGNATORY LOCAL UNIONS ON BEHALF OF THEMSELVES AND THEIR MEMBERS ("PLA"), WHICH IS ATTACHED TO THESE GENERAL CONDITIONS AS APPENDIX "A ", THE PROVISIONS OF WHICH MAY BE SPECIFICALLY INCLUDED HEREIN AS WELL AS INCORPORATED BY REFERENCE WITHIN THESE GENERAL CONDITIONS AS FULLY AS IF SET FORTH AT LENGTH HEREIN. TO THE EXTENT OF ANY CONFLICT BETWEEN THE GENERAL/SPECIAL CONDITIONS AND THE PLA, THE PROVISIONS IN THE PLA WILL CONTROL. NOTWITHSTANDING SPECIFIC REFERENCES TO CERTAIN PROVISIONS THE PLA IN THESE GENERAL CONDITIONS, THE CONTRACTORS AND SUBCONTRACTORS OF ALL TIERS MUST COMPLY WITH ALL PROVISIONS OF THE PLA.

ALL SUCCESSFUL BIDDERS AND THEIR SUBCONTRACTORS OF WHATEVER TIER MUST BECOME BOUND BY, AND SIGNATORIES TO, THE PLA BY SIGNING A LETTER OF ASSENT. THE LETTER OF ASSENT REQUIRED OF CONTRACTORS AND SUBCONTRACTORS IS SET FORTH AS SCHEDULE B TO THE PLA.

§ 1.13 Notice

§ 1.13.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to

whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.13.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Newburgh Enlarged City School District is the Owner and the Board of Education of the Newburgh Enlarged City School District shall be the only entity with authority to bind the Owner or provide approval or authorization on behalf of the Owner as required by law and/or the policies and procedures of the Newburgh Enlarged City School District unless Contractor is notified otherwise in writing signed by the Owner. Except as otherwise provided herein or in Article 4, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative. With respect to any Claim by Contractor, including without limitation any Claim for a Change Order or any Claim for an extension of the Contract Time or upward adjustment of the Contract Sum, any rejection of such Claim, either in whole or in part, made by Construction Manager or the Architect to Contractor shall be deemed to have been made by the Owner unless the Owner's decision to the contrary is set forth in writing.

(Paragraph deleted)

§ 2.2 Information and Services Required of the Owner

§ 2.2.1 With the exception of the building permit, all permits and fees, approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities are the responsibility of the Contractor under the Contract Documents. Contractor's price shall include all fees and other costs for securing and maintaining (by Contractor or its Subcontractors) for the life of the Project: all permits, PE licenses, connection fees, inspections, etc., applicable to, or customarily secured for the Work. This provision includes any permits to be issued in the name of the Contractor as required for the Work. The Contractor shall furnish Construction Manager and Architect or Owner with original copies of all permits prior to the commencement of Work and shall prominently display a copy of all permits at a location agreed upon with the Construction Manager or Owner.

§ 2.2.2 If reasonably requested by the Contractor in writing, the Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.3 Following receipt of a written request therefore from the Contractor, the Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's reasonable written request for such information or services.

§ 2.2.4 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor two copies of the Contract Documents for purposes of making reproductions. Any and all additional copies will be furnished to Contractor at its own expense (including the cost of reproducing, postage and handling).

§ 2.3 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or fails to carry out Work in accordance with the Contract Documents, or fails or refuses to provide a sufficient amount of properly supervised and coordinated labor, materials, or equipment so as to permit the Owner to reasonably infer that the Contractor will not be able to complete the Work within the Contract Time or fails to remove, bond or discharge (within thirty (30) days after actual notice or notice pursuant hereto from the Owner or the Construction Manager) any lien filed upon or against Owner's property or against the Project funds by anyone claiming by, through, or under Contractor, or disregards the instructions of Construction Manager, Architect or Owner when such instructions are based upon the requirements of the Contract Documents, the Owner may issue a written

order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated to the Owner's satisfaction in its discretion; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for its benefit or the benefit of the Contractor or any other person or entity.

(Paragraphs deleted)

§ 2.4 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with or is otherwise in default of any term of the Contract Documents and fails within a three (3)-day period after delivery of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness (to the reasonable satisfaction of Owner), the Owner may at the end of such three (3) day period with no further notice required, without prejudice to other remedies the Owner may have, correct such deficiencies.

In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect or failure, and also including, without limitation, the Owner's reasonable attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder), and all other reasonable expenses relating thereto. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. Such Change Order shall be deemed to have been executed by the Contractor, whether or not actually signed by the Contractor. The right of the Owner to stop and carry out the Work (or any portions thereof) pursuant to this paragraph shall not give rise to any duty on the part of the Owner to exercise this right for its benefit or the benefit of the Contractor or any other person or entity.

(Paragraphs deleted)

§ 2.5 Owner's Right to Audit. Contractor shall keep full and accurate records of all costs incurred and items billed in connection with the performance of the Work, which records shall be open to audit by the Owner or its authorized representatives during performance of the Work and until six (6) years after Final Payment. In addition, the Contractor shall make it a condition of all subcontracts relating to the Work that any and all Subcontractors will keep accurate records of costs incurred and items billed in connection with their work and that such records shall be open to audit by the Owner or its authorized representatives during performance of the Work and until six (6) years after its completion.

§ 2.6 Owner's rights stated in this Article 2 are cumulative and not in limitation of any rights of the Owner granted elsewhere in the Contract Documents, or at law or in equity. Further, it is expressly understood that notwithstanding any of the rights and authority granted the Owner in this Article 2 or elsewhere in the Contract Documents, in no event shall the Owner, Construction Manager or Architect have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The plural term "Multiple Prime Contractors" refers to persons or entities who perform construction under contracts with the Owner that are administered by the Construction Manager. The term does not include the Owner's own forces, including persons or entities under separate contracts not administered by the Construction Manager.

§ 3.1.3 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.4 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

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§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Submission of its bid to the Owner and subsequent execution of the Contract by the Contractor is a representation that the Contractor has carefully examined the Contract Documents and has visited and has performed a detailed investigation of the site, become thoroughly familiar with the nature and local conditions under which the Work is to be performed (including but not limited to its condition, layout, nature, surrounding areas, climatic conditions, etc.) and all matters which may in any way affect the Work or its performance and correlated personal observations and investigations with requirements of the Contract Documents. Submission of its bid to the Owner and subsequent execution of the Contract by the Contractor is a further representation that the Contractor has carefully examined the Contract Documents (with such review in Contractor's capacity as a contractor and not a design professional unless otherwise specifically provided in the Contract Documents) and that any errors, omissions, ambiguities, discrepancies or conflicts found in said Contract Documents have been brought to the attention of the Architect for clarification prior to the Contractor's submission of its bid. The Contractor further represents that as a result of its examinations and investigations, the Contractor thoroughly understands the Contract Documents and their intent and purpose and is familiar with all federal, state and local statutes, laws, codes, ordinances, regulations, rules, and lawful orders of public authorities as they apply to the Work, and that the Contractor will abide by same. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any other improvements located on the Project site. As required by this Contract, the Contractor shall be responsible for providing a safe place for the performance of the Work. Claims for extension of the Contract Time or additional compensation as a result of the Contractor's failure to follow the foregoing procedures and to familiarize itself with all local conditions and the Contract Documents shall not be allowed.

§ 3.2.1.1 The Contractor is deemed to be a qualified expert in the systems and construction requirements of the Work of its Contract. The Contractor hereby specifically acknowledges and declares that the Contract Documents are full and complete, are sufficient to have enabled it to determine the cost of the Work and that the Drawings, the Specifications and the Addenda are sufficient to enable the Contractor to construct the Work outlined therein in accordance with all federal, state and local statutes, laws, codes, ordinances, regulations, rules, and lawful orders of public authorities as they apply to the Work, and otherwise to fulfill all of its obligations under the Contract Documents. In addition, if the Contractor performs any construction activity while it knows or should have known that any of the Contract Documents contains an error, inconsistency or omission, the Contractor shall be responsible for such performance and shall bear the costs for correction thereof.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before ordering any materials and before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it and otherwise verify all field conditions. Contractor shall be responsible for the correctness of all measurements. Contractor shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors or omissions in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by made known to, or that should have been discovered by the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require before commencing activities. . It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Any errors due to the Contractor's failure to so verify all such grades, elevations, locations or dimensions shall be promptly rectified by the Contractor without any additional cost to the Owner.

§ 3.2.2.1 The accuracy of grades, elevations, dimensions, or locations of existing conditions is not guaranteed by the Construction Manager, Architect or Owner, and the Contractor is responsible for verifying same. No extra charges or compensation or extension of the Contract Time will be allowed on account of differences between actual dimensions and the dimensions indicated on any Drawings or elsewhere in any Contract Documents. Any difference that may be found shall be submitted to the Construction Manager and Architect for resolution before proceeding with the Work.

§ 3.2.2.2 If a minor change in the Work is found necessary due to actual field conditions, the Contractor shall submit through the Construction Manager detailed drawings of such departure for the approval of the Architect before making the change.

§ 3.2.2.3 In case of omissions or discrepancies between the Contract Documents, the Contractor shall secure instructions from the Architect through the Construction Manager before proceeding with the Work affected by omissions or discrepancies. The Contractor shall assume full responsibility and cost for proceeding with such Work without approval.

§ 3.2.2.4 During the course of Work, should any errors, omissions, ambiguities, discrepancies or conflicts be found on the Drawings or in the Specifications to which the Contractor has failed to call attention before submitting its bid, the Architect through the Construction Manager shall interpret the intent of the Drawings and Specifications and the Contractor hereby agrees to abide by the Architect's interpretation and agrees to carry out the Work in accordance with the decisions of the Architect at no additional cost to Owner or compensation for Contractor and with no extension of the Contract Time.

§ 3.2.2.5 **Salvageable Materials:** All existing materials, equipment, misc. etc. scheduled for demolition are the property of the Owner. If requested or as identified in project documents, Contractors will remove and store any such items to a location designated by the Owner.

§ 3.2.3 The Contractor in its review of the Contract Documents as required herein shall promptly report to the Construction Manager and Architect any nonconformity of the Contract Documents with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require.

§ 3.2.4 If the Contractor believes that it is entitled under the Contract Documents to either or both of an increase in the Contract Sum or extension of the contract time because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 and its subsections or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 and its subsections or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations.

§ 3.2.5 The Contractor may submit requests for information to the Architect through the Construction Manager to help facilitate the Contractor's performance of the Contract. Prior to submitting each request for information, the Contractor shall first carefully study and compare the Contract Documents, field conditions, other Owner provided information, Contractor prepared Coordination Drawings, and prior Project correspondence and documentation to determine that the information to be requested is not reasonably obtainable from such sources.

§ 3.2.6 Each request for information shall be submitted to the Architect through the Construction Manager, in writing, on the form immediately following these Conditions. Each request for information shall identify the specific sources which were reviewed by the Contractor in an effort to determine the information requested, and a statement to the effect that the information being requested could not be determined from such sources.

§ 3.2.7 The Contractor shall submit each request for information sufficiently in advance of the date by which such information is required in order to allow the Architect sufficient time, in the Architect's professional judgment, to permit adequate review and response and to permit Contractor compliance with the latest construction schedule.

§ 3.2.8 The Contractor shall maintain a log at the Project site that sequentially numbers and lists each request for information. This log shall contain the Drawing reference or Specification section to which the request pertains, the date of the request, to whom the request was made, by whom the request was made, the nature of the request, and the Architect's resolution thereof. This log shall be reviewed at each Project meeting and the status of the requests for information shall be made part of the minutes of such meetings.

§ 3.2.9 **The Contractor shall reimburse the Owner or accept a charge-back against contract sums due from the Owner for amounts charged to the Owner by the Architect for responding to Contractor requests for information where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner provided information, Contractor prepared Coordination Drawings, or prior Project correspondence or documentation.** § 3.3 Supervision and Construction Procedures

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§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. Where the Contract Documents refer to particular construction means, methods, techniques, sequences or procedures or indicate or imply that such are to be used in the Work, such reference is intended only to indicate that the operations of the Contractor shall be such as to produce at least the quality of work implied by the operations described, but the actual determination of whether or not the described operations may be safely and suitably employed on the Work shall be the sole responsibility of the Contractor.

§ 3.3.1.1 The Contractor shall, prior to start of any portion of the Work:

- .1 review any specified construction or installation procedures, including those as may be recommended by the proposed manufacturer(s);
- .2 advise the Architect through the Construction Manager, in writing, if the specified procedure or procedures deviate from good construction practice;
- .3 advise the Architect through the Construction Manager, in writing, if following said procedure or procedures will affect any warranty, including Contractor's general warranty;
- .4 advise the Architect through the Construction Manager, in writing, of any objections the Contractor may have to the specified procedure or procedures;
- .5 propose to the Architect through the Construction Manager, in writing, any alternative procedure or procedures which the Contractor will warrant.

§ 3.3.1.2 All loss, damage, or liability, or cost of correcting defective Work arising from the employment of any construction means, methods, techniques, sequences or procedures shall be borne by the Contractor notwithstanding that such construction means, methods, techniques, sequences or procedures may be referred to, indicated or implied by the Contract Documents; it being understood that in no event shall the Owner, Construction Manager or Architect have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.4 The Contractor shall inspect all materials as delivered to the premises and shall reject any materials that will not conform to the Contract Documents when properly installed.

§ 3.3.5 The Contractor shall be responsible for and coordinate any and all inspections required by any governmental body having jurisdiction over the Work or Project. Failure to obtain any permits, licenses or other approvals because of the failure of the Contractor to conform to this requirement shall not extend the Contract Time, and the Contractor shall not be entitled to any increase in the Contract Sum therefore. In addition, any additional costs and/or expenses of any nature incurred by the Owner as a result of the Contractor's failure to conform to this requirement shall constitute a charge against the Contractor's Contract.

§ 3.3.6 Contractor shall perform all Work in accordance with all requirements of all federal, state and local statutes, laws, codes, ordinances, regulations, rules, and lawful orders of public authorities as they apply to the Work.

§ 3.3.7 During periods of active construction, Contractor shall consult daily and cooperate with the Construction Manager, Architect and Owner. On a continuous and daily basis, Contractor shall keep the Construction Manager, Architect and Owner notified of when Work will be starting, restarting, suspended and temporarily or permanently concluding.

§ 3.3.8 Contractor shall attend all meetings, at a minimum on a weekly basis, as required by the Owner and/or the

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Construction Manager or Architect to be held at a location as may be determined by Construction Manager or Owner. These meetings will be held to arrange for a satisfactory performance of the Work of this Contract and/or the coordination of all Multiple Prime Contractors so as not to impede the progress of the Project. Failure of Contractor to attend said weekly (at a minimum) meetings shall be deemed a material breach of this Contract. Contractor shall be responsible for all delays and/or expenses incurred for failure to attend meetings and any coordination difficulty.

§ 3.3.9 Contractor shall provide copies of its daily construction reports to the Construction Manager or any other individual so identified by Owner for such purpose. Unless otherwise specified, these reports shall be submitted no later than 10:00 am the following workday. The daily reports shall be for Construction Manager's and Owner's information and provide detailed information as required by the Construction Manager or Owner concerning the Contractor's activities and operations only. If any type of 'daily construction' form is provided by Construction Manager or Owner for purposes of compliance with this section, such form shall be used by Contractor.

§ 3.3.10 Unless otherwise requested by Construction Manager, or specified elsewhere in the Contract Documents, Contractor shall submit two-week look ahead schedules identifying the anticipated activity and material needs for all of the Work scheduled to be performed by the Contractor and its Subcontractors for the identified time period. The Contractor shall keep this schedule current and provide a bi-weekly report to the Construction Manager and Owner concerning the actual performance and activity compared to the two-week look ahead. If a form is provided by Construction Manager for the purpose of compliance with this section, such form shall be used by Contractor.

§ 3.3.11 In addition to the Owner's right to take Work away (set forth in Section 2.4), if Contractor fails to keep the site safe and clean within four (4) hours of being notified by the Construction Manager or Owner, either verbally or in writing, the Construction Manager or Owner may, at Owner's option, have this Work performed and back charged to Contractor at prevailing overtime rates plus 15%. For purposes of this section, notwithstanding anything contained to the contrary in the Contract Documents, verbal notice to field personnel is deemed notice to the Contractor. Owner's rights pursuant to this paragraph shall not give rise to any duty on the part of the Owner to exercise this right for its benefit or the benefit of the Contractor or any other person or entity.

§ 3.3.12 Contractor shall allow sufficient time to inspect and accept the Work of other Multiple Prime Contractors and Owner's other contractors. Should any discrepancies be discovered, the Contractor shall provide notice to Construction Manager sufficiently in advance so that Construction Manager and Architect may have sufficient time to review same and corrective action can be taken (by all necessary parties) without affecting the progress of any Multiple Prime Contractor or Owner's other contractors or the Work.

§ 3.3.13 Unless otherwise requested by Construction Manager, or specified elsewhere in the Contract Documents, one (1) week after issuance of a Notice to Proceed or commencement of Work, whichever is earlier, Contractor shall provide two (2) copies of a video-taped recording of all existing conditions to the Owner through the Construction Manager. This taping shall provide a record of all relevant existing buildings, grounds, exterior conditions and interior conditions which may be affected by the Work. Contractor shall schedule a representative of both the Owner and the Construction Manager to be present at this taping. In the absence of this record, the Contractor shall be estopped from asserting that any damage to existing conditions/property was to any extent pre-existing when Owner or the Construction Manager asserts that such damage was caused by Contractor.

§ 3.3.14 Contractor must exert due care and diligence when working in or near any existing buildings or site work which is to remain. The absence of protection around such items shall not excuse the Contractor from its responsibility to provide protection. Any damages due to the Contractor's failure to discharge such responsibilities to the existing buildings, site work or facilities shall be repaired by the Contractor at its sole cost and expense and if Contractor cannot repair the same, it shall bear the cost thereof.

§ 3.3.15 All disconnect and/or tie-in Work involving any utilities that would interfere with the ongoing operations of the Owner shall be completed on an after-hours basis at a time that is mutually agreeable to the owner so as not to impact district operations. The performance of this Work shall be projected on the required schedules and the Construction Manager, Architect and Owner are to be notified at least forty-eight (48) hours in advance of commencing this Work. All overtime and standby personnel necessary to complete these tie-ins shall be the responsibility of the Contractor.

§ 3.3.16 In the event that Owner makes arrangements to open a building at the request of Contractor and the

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Contractor does not appear at the designated time and location, the Contractor shall pay the Owner for all costs incurred relating to the opening of said building for Contractor.

§ 3.3.17 Contractor shall provide to Owner and Construction Manager, as either of them may request, copies of all correspondence, memoranda and bulletins to and from the Construction Manager, Architect, Subcontractors, suppliers, public agencies, and others on the Project.

§ 3.3.18 Contractor agrees that it shall not permit any unauthorized persons or entities to visit or enter upon the Project site absent Construction Manager's or Owner's prior approval.

§ 3.3.19 Contractor shall arrange for reasonable protection to secure the Site against theft and vandalism and arrange for reasonable protection of adjoining property in agreement with Construction Manager and owner.

§ 3.3.20 Contractor shall develop methods of dust and fume control so as to comply with applicable legal requirements.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Contractor shall check all materials and labor entering into the Work site and shall keep full detailed accounts thereof.

§ 3.4.2 Equivalents and Substitutions

§ 3.4.2.1 The materials, products and equipment described in the Contract Documents establish the standard of required quality, function, dimension and appearance expected.

§ 3.4.2.2 Equivalents and Substitutions shall only be permitted as provided in the Contract Documents – SPECIFICATIONS – SUBSTITUTION PROCEDURES (SECTION 012500) and EQUIVALENTS (SECTION 012519). It is expressly agreed that without limitation to all other requirements of the preceding Specification sections and notwithstanding anything to the contrary in the Contract Documents, no equivalents may be proposed by Contractor and no equivalents will be considered by Owner after the time set forth in EQUIVALENTS SECTION 012519 and in no event any later than the time of Contract execution.

§ 3.4.2.3 Notwithstanding the above Section 3.4.2.2 or anything else in the Contract Documents to the contrary:

- (i) The Architect, Construction Manager and Owner's decision of approval or disapproval of a proposed equivalent or substitution shall be made in their sole discretion and shall be final.
- (ii) Should the Construction Manager, Architect and Owner not approve a proposed substitution, the costs incurred by Owner relating to the review of said substitution shall be deducted from the Contract Sum.
- (iii) The Contractor making a substitution shall bear all costs associated with such substitutions including, but not limited to: (a) redesign required for any of the Work; (b) material or quantity changes for any of the Work; (c) delays in any of the Work; or (d) requests for information generated due to substitutions.
- (iv) The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible items of mechanical and electrical equipment have been selected to have a coordinated design in relation to the overall appearance of the building. The Architect shall judge the design and appearance of proposed substitutes on the basis of their suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The Architect will not approve as equal to materials specified proposed substitutes which, in its reasonable opinion, would be out of character or quality of design of the Project.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor acknowledges that it is the Contractor's responsibility to hire all personnel for the proper and diligent prosecution of the Work and the Contractor shall maintain labor peace for the duration of the Project. Should any disorderly, incompetent or objectionable person be hired or employed by the

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Contractor or be let upon or about the premises of the Owner, for any purpose or in any capacity, he/she shall, upon request of the Construction Manager or Owner, be removed from the Project and not again assigned thereto without written permission of the Construction Manager or Owner. In the event of a labor dispute, the Contractor shall not be entitled to any increase in the Contract Sum or extension of the Contract Time.

§ 3.4.3.1 UNION DISPUTES / LABOR HARMONY (Also refer to Project Labor Agreement annexed hereto and made a part of these Conditions).

§ 3.4.3.1.1 The Contractor shall employ only labor on the Project or in connection with its Work capable of working harmoniously with all trades, crafts and any other individuals associated with the Work to be performed. There shall be no strikes, picketing, work stoppages, slowdowns or other disruptive activity at the Project for any reason by anyone employed or engaged by the Contractor to perform any portion of its Work. There shall be no lockout at the Project by the Contractor. The Contractor shall be responsible for providing the manpower required to proceed with the Work under any circumstance. Should it become necessary to create a separate entrance for a Contractor involved in a labor dispute, all costs associated with creating that entrance shall be borne by the Contractor involved in the dispute. Such costs shall include, but not be limited to, signage, fencing, temporary roads and security personnel as deemed necessary by the Owner for the safety of the occupants of the site.

§ 3.4.3.1.2 If Contractor has engaged the services of workers and/or Subcontractors who are members of trade unions, the Contractor shall make all necessary arrangements to reconcile, without delay, damage or cost to the Owner and without recourse to the Construction Manager, Architect or the Owner, any conflict between its Contract with the Owner and any agreements or regulations of any kind at any time in force among members or councils which regulate or distinguish what activities shall not be included in the Work of any particular trade.

§ 3.4.3.1.3 In case the progress of the Work to be performed by the Contractor is affected by any undue delay in furnishing or installing any items or materials or equipment required pursuant to its agreement with the Owner because of a conflict involving any such labor agreement or regulation, the Owner may require the other material or equipment of equal kind and quality be provided pursuant to a Change Order or Construction Change Directive but in no case shall the amount of such change be charged by the Contractor to the Owner as an additional cost to perform the Work pursuant to its Contract.

§ 3.4.3.1.4 The Contractor shall ensure that its Work continues uninterrupted during the pendency of a labor dispute.

§ 3.4.3.1.5 The Contractor shall be liable to the Owner for all damages suffered by the Owner occurring as a result of work stoppages, slowdowns, disputes or strikes.

§ 3.4.4 A sufficient force of competent workmen, foremen, and superintendents shall be employed at all times to permit the Work to be pursued with diligence until completion.

§ 3.4.5 No materials or supplies for the Work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale or other arrangement by which an interest is retained by the seller. The Contractor warrants that it has good title to all materials and supplies used by it in the Work, or resold to Owner, pursuant to the Contract Documents, free from all liens, Claims or encumbrances.

§ 3.4.6 Contractor shall comply with the Contract requirements and all applicable federal, state and local laws, including but not limited to provisions of the New York State Labor Law concerning hours of work, prevailing rate of wages (as published by the Bureau of Public Work, State of New York, Department of Labor and as may be included in the Contract Documents), minimum wages, working conditions, prevailing wage enforcement, notices to be posted at the Project site, and employment and payroll records. SEE SPECIFICATION SECTION 007343 – WAGE RATE REQUIREMENTS.

§ 3.4.6.1 The Contractor shall maintain on the Project site the original payrolls or transcripts thereof which the Contractor and its Subcontractors are required to maintain pursuant to New York State Labor Law. The Contractor and its Subcontractors shall submit original payroll or transcripts, subscribed and affirmed by it as true, with each and every Application for Payment. The Contractor and Subcontractors shall produce within five (5) days on the Project site and upon a written order of the Construction Manager, Owner, or relevant legal authority having jurisdiction over the Project or Work, such original payrolls or transcripts thereof, subscribed and affirmed by it as true, and the statements signed by each worker. In addition, the Contractor and its Subcontractors shall furnish to the Construction Manager or Owner upon written demand any other information to satisfy the Construction Manager or Owner that this Section 3.4.6 and the New York Labor Law, as to the hours of employment and rates of wages are being observed. The Contractor shall maintain the payrolls or transcripts thereof for six (6) years from the date of completion of the Work

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§ 3.4.6.2 When directed by the Construction Manager or Owner, the Contractor shall provide the Construction Manager with an attendance sheet for each day of which Work is performed on the Project site. Such attendance sheet shall be in a form acceptable to the Construction Manager or Owner and shall provide information for employees of the Contractor and its Subcontractors.

§ 3.4.7 All materials used permanently in the Work shall be new unless otherwise specified. The apparent silence of the Specifications as to any detailed description concerning any Work to be done and materials to be furnished shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the first quality are to be used, and all interpretations of the Specifications shall be made on this basis. All material incorporated in the Project shall be clean and exhibit no appearance of aging, exposure to weather, prior use, handling or damage of any kind.

§ 3.4.8 Manufacturer's identification shall be inconspicuous, but where nameplates contain information relative to characteristics or maintenance, they shall be clearly visible and located for easy access.

§ 3.4.9 Equipment intended for permanent installation shall not be operated for temporary purposes without the written permission of the Construction Manager and Owner.

§ 3.4.10 Materials shall be delivered in manufacturer's original sealed containers, with complete identification of contents and manufacturer, and kept sealed in original containers until installed/used. Labels shall not be removed until materials have been installed and inspected.

§ 3.4.11 Whenever the Contract Documents require delivery by the Contractor of any materials, equipment, or other items, the term delivery shall be deemed to include unloading and storing with proper protection where directed.

§ 3.4.12 Where material is specified to be furnished by others or furnished and delivered only, the Contractor installing the material shall be responsible for scheduling the delivery and receiving, unloading, storing, handling, relocating, hoisting, distribution, laying out and installing the material.

§ 3.4.13 Materials shall be applied or installed under proper climatic conditions, not when they may be affected by temperature, moisture, humidity or dust.

§ 3.4.14 No materials incorporated into the Project Work shall contain asbestos. Materials shall be "asbestos free" containing zero percent (0%) asbestos. The Construction Manager and the Owner reserve the right to request certification from the material manufacturer through the Contractor for certification that materials installed contain zero percent (0%) asbestos.

§ 3.4.15 Contractor shall include in its base price the cost of all rigging and equipment required for the performance and installation of its Work.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be the best quality and new. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects. Work, materials, or equipment not conforming to these requirements shall be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager, Architect, or Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The warranty provided in this Section 3.5 shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

§ 3.5.2 All warranties and/or guarantees shall include labor and materials and shall be signed by the manufacturer or Subcontractor as the case may be and countersigned by the Contractor. All warranties shall be addressed and assigned to the Owner and delivered to the Construction Manager upon completion of the Work and before the request for Final Payment. Contractor shall perform all Work in such a manner so as to preserve any and all such manufacturers'

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warranties.

§ 3.5.2.1 The Contractor will exercise its best efforts to service and to enforce for the benefit of Owner all manufacturers' warranties on all materials, equipment and fixtures incorporated into the Work.

§ 3.5.3 The warranties set forth herein shall survive completion, expiration and/or termination of this Contract.

§ 3.5.4 The Contractor will make good at its own cost and expense all defects and all damage caused to the Owner, due to correcting defective Work that is under warranty / guarantee. All corrections to defective Work shall be made at the convenience of the Owner.

§ 3.5.5 The Contractor represents that it is a manufacturer's approved Contractor in connection with the Work and will furnish the manufacturer's warranty to the Owner and Construction Manager.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. Notwithstanding the preceding, New York State sales tax is not applicable to any materials and supplies to be incorporated into the Project under the terms of the Contract, the Owner being exempt therefrom. There is no exemption from the sales or use tax on charges to the Contractor by any Subcontractor for the lease of tools, machinery, equipment or other property used in conjunction with the Project. The Contractor and its Subcontractors shall be solely responsible for and pay any and all applicable taxes, including sales and compensation for use taxes, on such leased tools, machinery equipment or other property, and for materials not incorporated in the Project and the amount of such taxes, if any, shall be deemed included in the bid submitted. Upon request, the Owner shall supply to the Contractor, an exemption certificate for such tax.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 The Owner shall, if same is required, secure and pay for the general building permit only. Without limitation, the mechanical, electrical and plumbing permits, the health and environmental impact fees due to water and sewer connections, if any, and all other fees and permits necessary for the Work of the Project shall be secured and paid for by the individual Prime Contractors. The Contractor, in securing other permits for construction or with regard to any other aspect of the Work which requires a permit, notwithstanding any contrary language in the Contract, shall at its own cost and expense make the necessary arrangements to complete, file and have sealed by a Professional Engineer licensed in the jurisdiction, any and all preliminary affidavits of certification that may be required by the governing agency or agencies having jurisdiction for issuing permits for the Work which are legally required when bids are received, but in any case, prior to starting Work.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. Contractor shall pay any costs or fees incurred in such compliance and any fines or penalties imposed for violation thereof. In addition, Contractor shall to the fullest extent permitted by law indemnify, defend, and hold harmless the Owner, Construction Manager, and Architect (and their employees, officers, and agents) from any resulting fines, penalties, judgments or damages, including reasonable attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder) imposed on, or incurred by such indemnified parties due to any such violation (or alleged violation). This provision shall survive the completion or earlier termination of the Contract.

§ 3.7.2.1 The Contractor shall be responsible for and coordinate any and all inspections required by any governmental body having jurisdiction over the Work and secure approval of and comply with requirements of all such authorities and deliver certificates of approval to the Construction Manager and Owner, and shall prepare all documents, including drawings, necessary to secure such approval.

§ 3.7.2.2 Certificate of Occupancy:

- .1 It shall be the responsibility of the Contractor to obtain all necessary approvals and releases from governing agencies having jurisdiction and to satisfy all requirements for the issuance and obtaining

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- of any required certificates of occupancy.
- .2 At such time as the Contractor makes application for any required certificate of occupancy, it shall, at its own cost and expense, file and have sealed by a Professional Engineer licensed in the jurisdiction, the final affidavit(s) of certification that the Project has been constructed in conformance with filed documents, ordinances, rules and regulations and such other data that may be required by the governing agency or agencies having jurisdiction over this Project.
- .3 Said certificate (if required for the Work of the Project) shall be turned over to the Construction Manager and Architect prior to certification of Final Payment and in conjunction with same.

§ 3.7.3 If the Contractor performs Work where it knows or should have known it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction. It shall be the obligation of the Contractor to review the Contract Documents to determine and to notify the Construction Manager and the Architect of any discrepancies between building codes and regulations of which the Contractor has knowledge or should be reasonably able to determine.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor, stating the reasons. If the Contractor disputes the Architect's determination or recommendation, the Contractor shall proceed with a Claim as provided and subject to Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests/Claims for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided and subject to Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.8.4 SEE SPECIFICATIONS – ALLOWANCES – SECTION 012100.

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§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants. Prior to starting the Work, the Contractor shall designate the project manager, superintendent and other key individuals who shall be assigned to the Project through and including final completion. Such designation shall be in writing and provided to the Construction Manager, Architect and Owner. The superintendent shall be in attendance at the Project site throughout performance of the Work, including full completion of the punch list. The superintendent shall not be employed or used on any other project during the course of the Work. The superintendent shall be subject to approval by the Owner in its sole discretion. Said superintendent shall be qualified in the type of Work to be undertaken and shall not be changed during the course of construction without the prior written consent of the Owner in its discretion. Should the superintendent leave the Contractor's employ, Contractor shall promptly designate a new superintendent. Owner shall have the right, at any time, to direct a change in the Contractor's superintendent or any of its representatives if their performance is unsatisfactory in the determination of Owner in its discretion. In the event of such demand, Contractor shall, within five (5) days after delivery of notification thereof, replace said individual(s) with an individual satisfactory to Owner. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. The Owner shall have no obligation to direct or monitor the Contractor's employees. All references herein to the superintendent shall be taken to mean the Contractor's superintending staff. All substantive communications from Contractor to Construction Manager, Architect or Owner shall be made and/or confirmed in writing by Contractor.

§ 3.9.2 The Contractor shall coordinate and supervise the work performed by Subcontractors so that the work is carried out without conflict between trades and so that no trade, at any time, causes delay to the general progress of the work. The Contractor and all Subcontractors shall afford each trade reasonable opportunity for the installation of their work and the storage of their materials.

§ 3.9.3 It is required of any and all supervisory personnel proposed for use by any Contractor that said personnel be versed in the written and spoken English language or, said Contractor shall furnish a full-time on-site interpreter to facilitate communications between the Owner's Representative, Construction Manager and the Architect.

§ 3.9.4 Contractor shall furnish the Owner's Representative in writing the names, addresses and telephone numbers of the members of his organization who can be contacted in the event of an off-hours emergency at the building site.

§ 3.9.5 The Contractor shall attend progress meetings with the Owner's Representative and such other persons the Owner may wish to have present. The progress meetings shall include all key personnel on the job, including the Contractor and Subcontractors, or other persons in charge of various phases of the work.

§ 3.10 Contractor's Construction Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information, and the Construction Manager's approval a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project schedule to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Multiple Prime Contractors or the construction or operations of the Owner's own forces

§ 3.10.1.1 Submission of an accepted Construction Schedule shall be a prerequisite to initial payment. If the schedule is not submitted by said dates the Contractor has acknowledged his approving the Owner to complete a schedule for the Contractor. Such schedule will become the product and ownership of the Contractor and the Contractor will be back-charged all costs pertaining to the service of producing the schedule. The Contractor shall provide revised schedules at appropriate intervals as required by the Conditions of the Work and Project.

§ 3.10.1.2 Revisions to schedule shall be approved by the Owner.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's and Architect's approval. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the

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Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals. Submittals for all long lead time items shall be provided to the Construction Manager and Architect within ten (10) days of Board of Education approval of bid/contract.

§ 3.10.3 The Contractor shall participate with other Multiple Prime Contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project schedule that is prepared by the Construction Manager (the "Project Schedule"). The Contractor shall make revisions to its construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project Schedule. Failure of Contractor to notify Construction Manager, Owner and Architect of any objection, in writing, within five (5) business days of receipt of any Project Schedule, including the final, coordinated, detailed Project Schedule and/or any updates thereto, shall be deemed acknowledgement of Contractor's acceptance thereof.

§ 3.10.4 The Contractor shall perform the Work in accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project Schedule.

§ 3.10.5 The Contractor shall be responsible for coordinating and expediting its fabrication and delivery schedules and keeping the Construction Manager, Architect and Owner informed as to its progress and its anticipated ability to stay on schedule. The Contractor shall monitor the progress of the Work for conformance with the Project Schedule and shall promptly advise Construction Manager and Owner of any delays or potential delays. Contractor shall update and coordinate its construction schedule with the Project Schedule once a month or more frequently if requested.

§ 3.10.5.1 Without limitation to Section 3.10.5 above, the Contractor shall submit progress/status reports on fabrication on long lead items (items requiring four (4) weeks and over to fabricate) to the Construction Manager, Architect and Owner every week.

§ 3.10.6 The Contractor shall schedule, coordinate and perform its Work, in cooperation with the Construction Manager, Architect and Owner, so as to avoid conflict, delay in, or interference with the Work of other Multiple Prime Contractors or operations of the Owner's own forces. The Contractor is solely responsible for the accuracy and adequacy of the scheduling information it provides to the Construction Manager, Architect and Owner as necessary for preparation of the overall Project Schedule; therefore, the Contractor is solely responsible for the accuracy and adequacy of the Project Schedule (or its updates) as it pertains to the Contractor's Work.

§ 3.10.7 TIME IS OF THE ESSENCE to the Owner for the Contractor's completion of its Work and completion of the Project. Accordingly, the Contractor shall prosecute the Work diligently, using such means and methods of construction in accord with the requirements of this Contract and as will assure its completion not later than the date specified in the Contract Documents (or on the date to which time for completion may be extended only as consistent with the terms of this Contract).

§ 3.10.8 The Contractor shall avoid conflict, delay in or interference with the Work of other Multiple Prime Contractors or operations of the Owner's own forces, if any.

§ 3.10.9 The Contractor shall include in its base price, all out of sequence Work and any Work required to be performed during overtime hours or non-working hours necessary to maintain the Project Schedule or any separate Owner's move-in schedule.

§ 3.10.9.1 The Owner shall have the right to direct a postponement or rescheduling of any date or time for the performance of any part of the Work that may interfere with the operation of the Owner's premises or any tenants or invitee thereof. The Contractor shall, upon the Owner's request, reschedule any portion of the Work affecting operation of the premises during hours when the premises are not in operation. Any postponement, rescheduling or performance of the Work under this Section 3.10.9.1 may be grounds for an extension of the Contract Time, if permitted and subject to all provisions relating to such, so long as additionally: (1) the performance of the Work postponed or rescheduled was originally properly scheduled by the Contractor in compliance with the requirements of the Contract Documents and (2) such rescheduling or postponement is required solely for the convenience of the Owner

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§ 3.10.10 If the Contractor shall fail to adhere to the approved Project Schedule, it shall (at no additional cost to Owner) promptly adopt such other means and methods of construction as will make up for the time lost and will assure completion in accordance with the approved Project Schedule.

§ 3.10.11 When the Contract Documents use the term "coordinate" and "coordination" in relation to the Contractor, those terms shall refer to the obligation of the Contractor to plan and direct its Work in cooperation and coordination with other Multiple Prime Contractors and with Owner's own forces at all times when the Work of the Contractor or its Subcontractors overlaps or dovetails with other work at the site, to the end that the overall Project Work is carried out continuously, in an efficient, workmanlike manner, without conflict between any trades, and so that no trade, at any time, causes delay to the general progress of the Work.

§ 3.10.12 The scheduling and coordination obligations of Construction Manager under this Contract are for the sole benefit of the Owner, and are not intended to create any rights whatsoever in favor of Contractor. The Contractor shall not have any Claim whatsoever against the Owner or Construction Manager or Architect arising out of any alleged neglect or failure on the part of Owner or Construction Manager or Architect to schedule or coordinate the Work of the Contractor.

§ 3.11 Documents and Samples at the Site

§ 3.11.1 The Contractor shall maintain, at the Project site for the Owner, in addition to the Project Record copy held by the Construction Manager, one copy of the Drawings, Specifications, Addenda, Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be available to the Architect and Owner and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed and signed by the Contractor, certifying that they show complete exact "as-built" conditions, stating sizes, kind of materials, vital piping, conduit locations and similar matters. Project Record Documents are hereby made part of this paragraph.

§ 3.11.1.1 Each Prime Contractor shall provide a copy of daily field reports to the Construction Manager at the end of each week.

§ 3.11.1.2 The Contractor shall maintain at the Project site, and shall make available to Owner and Architect, one record copy of the Drawings (the "Record Drawings") in good order.

§ 3.11.1.3 The Record Drawings shall be prepared and updated during the prosecution of the Work.

§ 3.11.1.4 Final payment and any retainage shall not be due and owing to Contractor until the Drawings receive the approval from the Architect and the Owner (and all other close-out requirements are met).

§ 3.11.1.5 The Contractor shall maintain all approved permit drawings in a manner so as to make them accessible to government inspectors and other authorized agencies. All approved Drawings shall be wrapped, marked and delivered to the Owner within thirty (30) days of final completion of the Work.

§ 3.11.2 Contractor shall maintain current at the site at least one (1) set of record Contract Drawings on which shall be shown in a neat and accurate manner the actual installation of the Work, indicating thereon any variations from the Contract Drawings. Changes, whether resulting from formal Change Orders, Construction Change Directives, or other instructions issued by the Construction Manager or Architect, shall be recorded and shall include without limitation change in sizes, grades, locations and dimensions, and substituted materials.

§ 3.11.2.1 This process shall incorporate both the changes noted above and all other deviations from the original Drawings, whether resulting from Project conditions encountered for from any other cause. Principal dimensions of concealed work shall be recorded.

§ 3.11.2.2 At the completion of the Project, these prints shall be submitted to the Construction Manager for Architect's final inspection and comment. The Contractor shall revise these drawings as required by Architect for legibility and accuracy, and they shall be submitted to Construction Manager and Architect for Owner's records. This shall also include an electronic copy of all such documents transmitted to the Construction Manager for the Owner.

§ 3.11.3 Contractor shall prepare and maintain signed daily logs and reports containing among other things: the Contractor's employees at the site; the Subcontractors at the site and number of employees of each; the general work

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(and location of same) performed by Contractor and/or Subcontractors; temperature and weather conditions; and description in reasonable detail of any extraordinary or special occurrences or problems encountered and other similar relevant data as Construction Manager or Owner may reasonably require. Contractor shall make all such logs and reports available to Construction Manager and Owner at all times and shall immediately deliver copies of such to Construction Manager and Owner promptly upon request.

§ 3.11.4 Contractor shall maintain on site and shall provide to Construction Manager and Owner, as Construction Manager or Owner may request, copies of all correspondence, memoranda and bulletins and other like documents to and from the Construction Manager, Architect, consultants, Subcontractors, suppliers, public agencies, and others on or relating to the Work of this Contract.

§ 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work. "Shop Drawings" as used herein includes fabrication, erection, layout and setting drawings; manufacturers' standard drawings; samples; schedules; descriptive literature, catalogs and brochures; performance and test data; calculations; wiring and control diagrams; all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems and methods of construction as may be required to show that the materials, equipment or systems and the position thereof conform to the Contract Documents. Shop Drawings shall establish the actual detail of all manufactured or fabricated items; indicate proper relation to adjoining Work; amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure; and incorporate minor changes of construction to suit actual conditions. One complete set of all product data and approved Shop Drawings shall be submitted to the Owner as part of the close-out requirements.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.3.1 The Contractor shall submit for review to the Architect through the Construction Manager samples of materials listed under each section of the Specifications. Samples shall be properly labeled for identification, consisting of the following: job titles, sample number, submission number, and label large enough to receive Architect's stamps.

§ 3.12.3.2 The Contractor shall not commence work under sections of the specifications until the Architect's approval in writing is obtained for all listed samples.

§ 3.12.3.3 The Contractor shall not construe approval of advance samples as total guarantee of acceptance of materials. Materials will be subjected to field inspections, from time to time, as work progresses.

§ 3.12.3.4 Samples of specific manufactured products shall be accompanied with appropriate manufacturer's literature at time of submission.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.9 through 4.2.11. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Multiple Prime Contractors, Separate Contractors, or the

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Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Multiple Prime Contractors. Contractor shall review all submissions for completeness. Contractor is responsible to stamp all Shop Drawings prior to submission to the Construction Manager and Architect. All information requested in the Contract Documents or otherwise by the Construction Manager or Architect shall be provided by Contractor in the form and following such procedures prescribed by the Construction Manager and the Architect. Submittals/ Shop Drawings will be returned without review if the information is not provided as required or if procedures as prescribed are not followed to the Construction Manager's or Architect's satisfaction.

§ 3.12.5.1 Contractor shall generate a complete "Submittal Log" within one (1) calendar week of issuance of a Notice to Proceed or commencement of Work, whichever is earlier. This log shall list all required submittals specific to the trade as detailed in the Project Manual/Specifications. If Construction Manager provides a form for compliance with the terms of this Section, such form shall be used by Contractor.

§ 3.12.5.2 All submissions shall be sent to the Construction Manager and Architect by any method required by Construction Manager and Architect for such submission.

§ 3.12.5.3 Contractor shall provide one transmittal for each submission package identifying each unique submission individually. For each submittal with the submission package, the Contractor shall identify the length of the delivery time and the necessary "last date" an item may be received on site. Contractor shall keep a log of all of its submissions in a manner reasonably prescribed by the Construction Manager and Architect.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. Architect's review of such Shop Drawing and submittals is for the purpose of checking for conformance with information given and the design concept expressed in the Contract Documents; and not for the purpose of determining the accuracy and completeness of details such as field/site dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect. Contractor shall be responsible for all cost and expense relating to any work performed by it in violation of this Section.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities

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for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

§ 3.12.11 Contractor is responsible for providing any required mock-ups required by the Contract Documents out of sequence as needed for the Project.

§ 3.12.12 All shop drawings for any architectural, structural, mechanical or electrical work must be submitted to the Architect through the Construction Manager. The Contractor represents and warrants that all shop drawings shall be prepared by persons and entities possessing expertise and experience in the trade for which the shop drawing is prepared and, if required by the Architect or applicable law, by a licensed engineer.

§ 3.12.12.1 Each shop drawing shall contain a title block with provisions for the following:

- (1) Number and Title of Drawing.
- (2) Date of Drawing or Revision.
- (3) Name of project.
- (4) Name of Contractor or Sub-contractor submitting Drawing.
- (5) Specification Section Title and Number.
- (6) Space for Architect's Stamp and Received Stamps.

§ 3.12.12.2 Each shop drawing shall have listed on it all Contract Reference Drawing Numbers plus Shop Drawing Numbers on related work by other Subcontractors if available.

§ 3.12.12.3 Each shop drawing submission shall have indicated on the drawing under the submission number (whether first, second, third, etc.).

§ 3.12.12.4 Shop drawings for work of one trade shall be checked by Subcontractors of related trades, and shall have received their stamp of approval before being submitted to the Architect.

§ 3.12.12.5 Each shop drawing submission after the first submission shall be clear of all previous stamps.

§ 3.12.13 Contractor shall communicate and supply Shop Drawings to other Contractors to ensure proper coordination.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall have limited access to the site on the inside and outside of the Buildings. The Contractor shall confine operations at the site to areas designated by the Owner or Construction Manager and permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.13.1.1 The Owner's Representative shall establish the limits of the construction site in addition to any contract limit lines shown on the Drawings. The Contractor shall continue his operations within these limits, unless upon written request and reply, a variance is agreed to by the Construction Manager and the Owner. The Contractor shall be responsible for trespassing on and/or damage to other property by any of his employees or his subcontractors' employees.

§ 3.13.1.2 The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents.

§ 3.13.1.3 The Contractor shall be required to perform the work of the Project with no interruption to the Owner's operations. Any work which will interfere with the Owner's operations shall be performed on evenings and weekends when the Owner's facilities are not in operation. All costs incurred by the Owner to make the facilities available during those times shall be borne by the Contractor. The Owner reserves to itself the right to determine what work will "interfere" with its operations and said determination shall be final.

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager and Owner before using any portion of the site. Field personnel shall be confined to the Work area assigned.

§ 3.13.3 Unless otherwise specified in the Contract Documents, Contractor is responsible for its own storage and personnel trailers at the site, and Contractor will be required to supply trailers and storage as required. All costs related to delivery, construction, protection, power, etc. shall be borne by the Contractor. The Owner (unless otherwise specified in the Contract Documents) WILL NOT PROVIDE STORAGE SPACE. The placement of trailers will be strictly limited to predetermined locations. Approval of the placement of any trailer or storage box must be received from the Construction Manager and contained within the fence of the construction site.

§ 3.13.3.1 Only materials and equipment which are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it is to be promptly removed from the Project site. Protection of construction materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall be held responsible for repairs, patching, or cleaning arising from such use.

§ 3.13.4 The right of possession of the premises and the improvements made thereon by the Contractor shall remain at all times in the Owner. The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents.

§ 3.13.5 Contractor shall confine its use of the premises, for all purposes, to the areas occupied by the construction and related storage areas as and if shown.

§ 3.13.6 The Contractor shall provide all required temporary access walkways, both interior and exterior, temporary partitioning and the like necessary to complete all operations.

§ 3.13.7 The Contractor shall maintain unobstructed entrance to and/or exit from the present building complex. All Contractor's Work areas shall be kept clean each day of refuse. THE ENTIRE FACILITY WILL REMAIN IN OPERATION DURING THE COURSE OF THE ENTIRE CONSTRUCTION OPERATIONS. Contractor shall schedule its Work so as not to interfere with any traffic to and from the required areas of use. Contractor shall be responsible for maintaining all traffic and shall provide all required barriers and protection as required to safeguard the Work and the public and the occupants of the building during Construction.

§ 3.13.8 Contractor, its Subcontractors, workmen, suppliers, etc., will be held to adhere strictly to all Owner requirements and shall not occupy or carry on traffic through other parts of the site or interior of present buildings, except by specific permission from the Owner.

§ 3.13.9 The Contractor shall repair or replace any existing trees, shrubbery or other planting damaged by operations and/or workmen employed in performance of the Contract.

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§ 3.13.10 During the whole course of the Work, the Contractor shall conduct its Work and operations as to interfere with traffic near the Work as little as possible and effect by every reasonable means the safety and comfort of pedestrians, vehicles and vehicle passengers near the Work.

§ 3.13.11 Employees, vehicles, equipment and material of Contractor and of all others utilized by the Contractor for the performance of its Work shall enter onto the construction site only at those locations designated or approved by the Owner as made known by Construction Manager.

§ 3.13.12 Contractor shall familiarize itself with all access and storage requirements and shall be subject to the same. Contractor shall properly maintain all access to Work and storage areas so that there will be continuous unimpeded access to the Work site in all seasons of the year, on all regular working days and during all regular working hours of any and all trades employed by any Contractor during Work at the site.

§ 3.13.13 Only such vehicles, trucks and equipment shall be parked or stored within the Work area as are absolutely necessary for performing the Work, for the length of time that a particular phase of Work is performed. ALL OTHER CONTRACTOR'S VEHICLES AND/OR EMPLOYEES' AND/OR WORKMEN'S VEHICLES, INCLUDING PASSENGER CARS, SHALL BE PARKED OFF THE SITE.

§ 3.13.14 The Contractor and any entity for which the Contractor is responsible shall not erect any sign on the Project site without the written consent of the Owner, which may be withheld in the sole discretion of Owner.

§ 3.13.15 Without prior approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project site, including, without limitation, lavatories, toilets, entrances, and parking areas other than those designated by the Owner. Without limitation of any other provision of the Contract documents, the Contractor shall use its best efforts to comply with all rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project site and the building as amended from time to time. The Contractor shall immediately notify the Owner in writing if during the performance of the Work the Contractor finds compliance with any portion of the rules and regulations to be impracticable, setting forth the problems of such compliance and suggesting alternatives through which the same results intended by such portions of the rules and regulations can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives or require compliance with the existing requirements of the rules and regulations. The Contractor shall also comply with all insurance requirements and collective bargaining agreements applicable to use and occupancy of the Project site and the Building.

§ 3.13.16 The Contractor shall provide full and free access for the Architect, Construction Manager, Owner and/or their representatives, to inspect job materials, equipment, fabrication, facilities, and storage locations, at and away from the Project site.

§ 3.13.17 SECURITY:

§ 3.13.17.1 It will be the responsibility of the Contractor to provide necessary and required security measures to adequately safeguard the construction site from vandalism and intrusion of unauthorized persons.

§ 3.13.17.2 The Contractor shall submit the means and methods of security to the Owner through the Construction Manager. The Project site must be secured 24 hours a day, seven (7) days a week, including all holidays.

§ 3.13.17.3 All workpersons and employees of Contractor are prohibited from:

- .1 Trespassing or leaving any vehicle on any property not assigned by the Owner as set aside for the use of the Contractor.
- .2 Leaving any vehicle on the grounds unless it is locked, and the ignition keys are removed.

§ 3.13.17.4 All employees or persons entering upon the property surrounding the facilities affected by the construction are restricted to the immediate area of Work. Only persons having official business will be admitted to the construction site.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.14.3 Only trades persons skilled and experienced in cutting and patching shall perform such work.

§ 3.14.4 Where required: Each Contractor before starting work shall consult with the Construction Manager and other Contractors to determine locations and sizes of required chases and openings for others. Construct chases and leave openings at proper locations and size to receive work of others. After work of others has been installed, fill in openings and/or patch around installed materials. After executing the above procedure, if chases, sleeves or openings are required after floors, walls, etc. are in place, the Contractor requiring such chases, sleeves or openings shall be responsible for cutting and patching as required for his work.

§ 3.14.5 The Contractor shall not cut, patch, damage or alter installed work, without the Architect's consent.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. On a daily basis and t completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project, and shall leave the entire area clean or its equivalent.

§ 3.15.1.1 The Contractor shall broom sweep all construction areas every day. The Construction Manager or Owner may perform an inspection each afternoon to determine that the Work areas of the Contractor have been properly cleaned.

§ 3.15.1.2 All Contractor's work areas shall be kept clean each day, of refuse, including containers, cups and the like. The facilities will remain in operation during the course of the entire construction operation. All Contractors performing work on this Contract shall schedule their work so as not to interfere with any traffic to and from the required areas of use. The Contractor shall be responsible for maintaining all traffic, and shall provide all barriers and protection as required to safeguard the work and the public and the occupants of the building during construction. The Prime Contractors shall comply with all state and local fire code regulations during construction. They include vehicular parking, smoke partitions, rescue window obstructions, use of extension cords.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so without notification to the Contractor and the Owner shall be entitled to reimbursement from the Contractor including reimbursement for the cost of the time of any custodial staff of Owner or cleaning contractors utilized for cleaning up.

§ 3.15.3 All debris required to be removed from the Project shall be removed in accordance with all applicable federal, state and local statutes, laws, codes, ordinances, regulations, rules, and lawful orders of public authorities as they apply to such. The Contractor shall warrant that all debris shall be disposed of in accordance with all such applicable statutes, laws, codes, ordinances, regulations, rules, and lawful orders and at a facility permitted and authorized to receive materials of the type and nature so removed from the premises. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Owner, Architect and Construction Manager, from any claims, damages, losses and expenses, including, without limitation, attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder) of every kind character and nature whatsoever, arising out of or relating to Contractor's violation of this section but only to the extent caused by the negligent acts or

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omissions of the Contractor, any of its Subcontractors, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this section. The obligations of this section shall survive the completion of the Contract or its earlier expiration or termination.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the Owner and its governing Board, Construction Manager, Architect, Construction Manager's and Architect's consultants, and, board members, officers, agents and employees of any of them from and against claims, damages, losses, liabilities, demands, causes of action, judgments and expenses, including but not limited to attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder), of every kind and character that are caused by, attributable to, arising out of or resulting from or are in any way connected, in whole or in part, to the performance of the Work, provided that such claim, damage, loss, liability, demand, cause of action, judgment or expense is attributable to (i) bodily injury, sickness, disease or death, or to injury to or (ii) destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable (an "Indemnified Claim"), regardless of whether or not such Indemnified Claim, is caused in part by a party indemnified hereunder or whether contractual liability for indemnity or liability without fault is sought to be imposed on the Owner or any other party indemnified hereunder. Notwithstanding the preceding, it is further agreed that notwithstanding any provision to the contrary in this section or anywhere else within this Contract or otherwise in the Contract Documents, all of the defense and indemnification and hold harmless obligations herein are subject and subordinate to the limitations of any applicable laws of the State of New York and in no event shall Contractor nor any other party be required to defend or indemnify any person in violation of such applicable laws. It is further understood that in the event that a court of competent jurisdiction determines that any of the defense or indemnification obligations hereunder are unenforceable in whole or in part, Contractor's obligation to defend and indemnify shall be replaced with the strictest enforceable defense and indemnification provision allowable by such laws. Contractor's obligations hereunder shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 3.18.3 The obligations contained in this Section 3.18 shall survive the completion or earlier expiration or termination of this Contract.

§ 3.19 Without limiting Section 3.18 above, the Contractor shall additionally, to the fullest extent permitted by law, defend, indemnify and hold harmless the Owner and its governing board, Construction Manager, Architect, Construction Manager's and Architect's consultants, and, board members, officers, agents and employees of any of

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them from and against any and all claims, damages, losses, liabilities, demands, causes of action, judgments or expenses including but not limited to attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder), of every kind and character that are caused by, attributable to, arise out of or result from or are in any way connected, in whole or in part, to Contractor's violation (or alleged violation) of any laws or regulations applicable to the Contractor's Work but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable.

§ 3.19.1 The obligations contained in this Section 3.19 shall survive the completion or earlier expiration or termination of this Contract.

ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 The Owner shall retain a construction manager lawfully licensed to practice construction management or an entity lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.3 Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Construction Manager, and Architect.

§ 4.1.4 It is expressly agreed and understood that at any time during the progress of the Project, the Architect and/or Construction Manager may be terminated and that such termination shall not for any reason whatsoever be deemed a breach of this Contract. If the employment of the Construction Manager or Architect is terminated, the Owner shall employ a successor construction manager or architect within a reasonable time whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

§ 4.2 Administration of the Contract

§ 4.2.1 Without limiting the Architect's and/or Construction Manager's responsibilities and obligations to the Owner as set forth in their respective agreements with the Owner, the Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment. The Architect will also provide professional services as described in the Contract Documents. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 For the benefit of Owner only, and not Contractor, the Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager (1) known deviations from the Contract Documents and (2) defects and deficiencies observed in the Work. This shall not be deemed as any type of limitation on the Architect's responsibilities and obligations to the Owner as set forth in its agreement with the Owner.

§ 4.2.2.1 The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for site visits made necessary by the fault of the Contractor to maintain the Project Schedule or for defects and deficiencies in the Work. The Owner may see reimbursement pursuant to the procedures set forth in these General Conditions.

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§ 4.2.3 The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. For the benefit of Owner only, and not Contractor, the Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect (1) known deviations from the Contract Documents and the most recent Project schedule, and (2) defects and deficiencies observed in the Work. This shall not be deemed as any type of limitation on the Construction Manager's responsibilities and obligations to the Owner as set forth in its agreement with the Owner.

§ 4.2.4 The Contractor will coordinate its activities with those of other Multiple Prime Contractors in accordance with the latest approved Project schedule and in conformance with other requirements of the Contract Documents. SEE SPECIFICATIONS – MULTIPLE CONTRACT SUMMARY – SECTION 011200.

§ 4.2.4.1 If there is a coordination conflict between or among any Multiple Prime Contractors, and if the Owner or a Prime Contractor makes a written request to the Construction Manager, the Construction Manager shall use its best efforts to recommend a reasonable solution. The Construction Manager shall make such recommendations consistent with the latest approved Project Schedule, to the extent reasonably possible, as judged by the Construction Manager. The Contractor shall participate with other Multiple Prime Contractors and the Construction Manager and Owner in reviewing the Project Schedule when directed to do so. If so directed by Construction Manager or Owner in order to resolve coordination conflicts, the Contractor shall change the sequence or schedule of its Work in the manner provided for in these General Conditions and as otherwise may be required under the Contract Documents. The latest approved Project Schedule shall constitute the schedule to be used by the Contractor, other Multiple Prime Contractors, the Architect, Construction Manager and the Owner unless subsequently updated.

§ 4.2.5 The Construction Manager, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work.

§ 4.2.6 **Communications Facilitating Contract Administration.** Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Contractor shall endeavor to communicate with the Owner through the Construction Manager and shall contemporaneously provide the same communications to the Architect about matters arising out of or relating to the Contract Documents. In no circumstances shall the contractor communicate with district staff other than those expressly authorized. The Owner may generally communicate with the Contractor through the Construction Manager, but there shall be no limitation on the Owner's right to direct communication with Contractor. When Contractor responds to Owner following a direct communication from Owner to Contractor, Contractor shall contemporaneously provide a copy of the same communications to the Construction Manager. Contractor's communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall generally be through the Contractor, but there shall be no limitation on Construction Manager's, Owner's, and Architect's right to directly communication with Subcontractors and material suppliers as they deem necessary in their discretion. Contractor's communications by and with other Multiple Prime Contractors shall be through the Construction Manager and shall be contemporaneously provided to the Architect if those communications are about matters arising out of or related to the Contract Documents. Contractor's communications by and with the Owner's own forces shall be through the Owner.

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. The Construction Manager shall, for the benefit of the Owner only, determine in general whether the Work of the Contractor is being performed in accordance with the requirements of the Contract Documents and notify the Owner, Contractor and Architect of defects and deficiencies in the Work. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require additional inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, upon written authorization of the Owner, whether or not such Work is fabricated, installed or completed. The

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foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are Multiple Prime Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Multiple Prime Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.10 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.11 Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.12 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.13 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.14 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

§ 4.2.15 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

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§ 4.2.17 The Architect will interpret matters concerning Contractor's performance under, and requirements of, the Contract Documents on written request of the Construction Manager or Owner. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.18 Interpretations of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations, the Architect will endeavor to secure faithful performance by the Contractor, and will not be liable to the Contractor for results of interpretations so rendered in good faith.

§ 4.2.19 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents and agreed to by Owner in writing.

§ 4.2.20 The Construction Manager will receive and review requests for information ("RFIs") from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness, but Contractor shall be obligated to submit RFIs in a reasonable time in advance of its need for a response to enable Construction Manager and Architect a sufficient time to act upon such submission or necessary re-submission(s) thereof. Based upon the amount of RFI's received and their level of content, the Construction Manager and Architect shall jointly establish the level of importance of each RFI and shall be allowed a reasonable amount of time in their respective judgment to permit adequate review. The Contractor shall not have any right to an extension of Contract Time on account of delays due to the Contractor's failure to submit requests for the required information or the required approval in accordance with these requirements. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

(Paragraph deleted)

§ 4.2.20.1 Prior to submitting each RFI, Contractor shall first carefully study and compare the Contract Documents, field conditions, other Owner provided information, Contractor prepared coordination Drawings, and prior Project correspondence and documentation to determine that the information to be requested is not reasonably obtainable from such sources. Each RFI shall identify the specific sources which were reviewed by the Contractor in an effort to determine the information requested, and a statement to the effect that the information being requested could not be determined from such sources.

§ 4.2.20.2 The Contractor shall be responsible to generate its own RFI log with weekly updates and provide same to the Construction Manager. This log shall contain the Drawing reference or Specification section to which the request pertains, the date of the request, to whom the request was made, by whom the request was made, the nature of the request, and the Architect's resolution thereof. This log shall be reviewed at each Project meeting.

§ 4.2.20.3 The Contractor shall reimburse the Owner amounts charged to the Owner by the Architect for responding to Contractor requests for information where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner provided information, Contractor prepared coordination Drawings, or prior Project correspondence or documentation.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 General

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site or to otherwise furnish labor, material or other services with respect to a portion of the Work, and includes, but is not limited to, Specialists, Specialty Contractor, and Trade Subcontractors. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site or to otherwise furnish labor, material or other services with respect to a portion of the Work. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.1.3 The term "Specialist" or "Specialty Contractor" shall mean an individual or firm of established reputation, or, if newly organized, whose personnel have previously established a reputation in the same field, which is regularly engaged in, and which maintains a regular force of workmen skilled in either manufacturing or fabricating items required by the Contract, installing items required by the Contract, or otherwise performing work required by the Contract. Where the Contract Specifications require installation by a "Specialist", that term shall also be deemed to mean either the manufacturer of the item, an individual or firm licensed by the manufacturer, or an individual or firm who will perform such work under the manufacturer's direct supervision.

§ 5.1.4 Refer to Div. 1 of the Specifications for requirements for a delivery of a list of proposed Subcontractors to Construction Manager and Architect with or after receipt of bids and before award of Contract.

§ 5.1.5 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Construction Manager the names of the Subcontractors or suppliers for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Construction Manager or Architect has made reasonable written objection after receipt of the Contractor's list of Subcontractors and suppliers. The Contractor shall propose another Subcontractor to whom the Owner, Construction Manager and Architect have no reasonable objections. No increase in the Contract Sum or extension of the Contract Time shall be allowed where a Subcontractor is rejected by the Owner, Construction Manager or Architect who is deemed unqualified to perform the particular work subcontracted by the Contractor or otherwise not responsible, or having too many current projects handled by insufficient personnel.

§ 5.1.6 All Subcontractors of any tier or specialty are required to be bound by and comply with the Project Labor Agreement annexed to and made a part of these Conditions. All Subcontractors of any tier or specialty are required to sign a Letter of Assent as a condition of performing work for the Owner.

§ 5.2 The Contractor shall not enter into any Subcontract, contract, agreement, purchase order or other arrangement for the furnishing of any portion of the materials, services, equipment or Work with any party or entity if such party or entity is an "Affiliated Entity", unless such arrangement has been approved by the Owner, after full disclosure in relationship and all details relating to the proposed arrangement. The term "Affiliated Entity" means any entity related to or affiliated with the Contractor with respect to which the Contractor has direct or indirect ownership or control, including, without limitation:

- (i) Any entity owned in whole or in part by the Contractor;
- (ii) Any holder of more than ten percent (10%) of the issued and outstanding shares of, or the holder of any interest in, the Contractor; or
- (iii) **Any entity in which any officer, director, employee, partner or shareholder or member of the family of any of the foregoing persons) of the Contractor or any entity owned by the Contractor has a direct or indirect interest, which interest includes, but is not limited to, that of a partner, employee, agent or shareholder.**

(Paragraphs deleted)

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, including the Project Labor Agreement, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may

be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

- § 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
- .1 assignment is effective only after termination of the Contract by the Owner pursuant to Article 14 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract from and after the date on which Owner determines to accept any subcontract agreement(s). All sums due and owing by Contractor to any Subcontractor(s) and/or supplier(s) for Work performed or material supplied prior to the date of Owner's election to accept assignment of such subcontract agreement(s) and/or purchase order(s) shall constitute a debt between such Subcontractor(s)/material supplier(s) and Contractor. Contractor shall deliver acknowledgment in form and substance satisfactory to Owner from each of its Subcontractors and suppliers of the contingent assignment described herein whenever requested by Owner in writing.

§ 5.4.2 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity.

(Paragraph deleted)

§ 5.5

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 In addition to the other Multiple Prime Contractors on this Project, if any, the Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, which include persons or entities under separate contracts not administered by the Construction Manager, and to award other contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner's own forces or by other Multiple Prime Contractors, the Contractor shall make such Claim as provided in the Contract Documents.

§ 6.1.1.1 Should the Contractor sustain any damage or delay through any act or omission of any other Contractor having a contract with the Owner for the delivery of materials, supplies, equipment, plant or appliances, or should the Contractor sustain any damage or delay through any act or omission of a Subcontractor, the Contract shall have no claim against the Owner or their Architects for such damage or delay but shall have a right to recover or to claim damage only from the other Contractor or Subcontractor.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces including persons or entities under separate contracts not administered by the Construction Manager, the Owner shall provide that such contractors shall coordinate their work with the Work of the Contractor, who shall cooperate and coordinate with them so as to avoid delays.

§ 6.1.3 SEE SPECIFICATIONS – MULTIPLE CONTRACT SUMMARY – SECTION 011200.

§ 6.2 Responsibility Among Contractor and Other Multiple Prime Contractors and/or Owner's Own Forces

§ 6.2.1 The Contractor shall afford the Owner's own forces, Construction Manager and other Multiple Prime Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, or other Multiple Prime Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect discoverable discrepancies or defects in the construction or operations by the Owner or other Multiple Prime Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or other Multiple Prime Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 Coordination and Claims among and between Contractor and other Multiple Prime Contractors and Owner's Own forces.

§ 6.2.3.1 The Contractor shall not commit or permit any act which will interfere with the performance of work by any of Owner's own forces or any other Multiple Prime Contractor involved with the work (collectively referred to in this Section 6.2.3 and its subsections as "Other Contractors"). If the Contractor sustains any damage through any act or omission of Other Contractors or utilities having a contract with the Owner for the performance of work upon the site or of work which may be necessary to be performed for the proper execution of the Work to be performed hereunder, or through any act or omission of a subcontractor of such Other Contractor and/or utility, the Contractor shall have no claim against the Owner for such damage, but shall have a right to recover such damage from the Other Contractor and/or utility under the provision similar to the this Section 6.2.3 and its subsections which have or will be inserted in the contracts with such Other Contractors and/or utilities.

- (i) Should any Other Contractor having or who shall hereunder have a contract with the Owner for the performance of Work upon the site, sustain any damage through any act or omission of the Contractor hereunder or through any act or omission of any subcontractor of the Contractor, the Contractor agrees to reimburse such Other Contractor for all such damages and to defend at its own expense any suit based upon such claim.
- (ii) The Contractor agrees to the fullest extent permitted by law to defend and indemnify Owner, Architect and Construction Manager from all claims, causes of action, damages, losses and expense, made against or suffered by any of them arising out of Contractor's acts or omissions of the acts or omissions of any subcontractor of the Contractor.
- (iii) The Owner's right to indemnification hereunder shall in no way be diminished, waived or discharged, by the exercise of any other remedy provided for by the Contract or by law.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Multiple Prime Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner's own forces and other Multiple Prime Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, other Multiple Prime Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner without providing any prior written notice may clean up using its employees or cleaning contractor and the Construction Manager will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order issued by the Architect, Construction Change Directive or Field Order for a minor change in the Work, issued by the Architect or Construction Manager, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents. Change Orders shall be submitted in total amounts for a particular change and

not in installments for each trade thereafter. All partial Change Order submissions will be rejected and returned to the Contractor for completion.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work. A change in the Contract Sum or Contract Time shall be accomplished only by Change Order or Construction Change Directive. Accordingly, no course of conduct or dealings between the Parties or express or implied acceptance of alterations or additions to the Work shall be the basis of any Claim for an increase in the Contract Sum or any amounts due under the Contract Documents or an extension of the Contract Time.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 Unless otherwise agreed to in writing by the Owner and the Contractor, the combined overhead and profit that shall be included in the total cost (or credit) to the Owner for a Change in the Work shall be based on the following schedule:

- .1 For the Contractor, for Work performed by the Contractor's own forces:
 - a. 15% on the first \$25,000 of the change order direct cost of self-performed work,
 - b. 10% on the portion of the change order direct cost of self-performed work between \$25,000 and \$50,000 and
 - c. 7.5% on the portion of the change order direct cost of self-performed work between \$50,000 and \$200,000 and
 - d. 5% on the portion of the change order direct cost of self-performed work greater than \$200,000.
- .2 For the Contractor, for Work performed by the Contractor's Subcontractor five percent (5%) of the amount due the Subcontractor,
- .3 For each Subcontractor involved, for Work performed by that Subcontractor's own forces, fifteen percent (15%) of the cost,
- .4 For each Subcontractor involved, for Work performed by the Subcontractor's Sub-subcontractors, five percent (5%) of the amount due the Sub-subcontractor,
- .5 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7 and shall be itemized (including labor costs).

§ 7.2.3 A Change Order, when issued, shall be full compensation, or credit, for the extra Work performed, omitted, or substituted. It shall show on its face, any adjustment in time for completion of the Project as a result of the Change in the Work. Each Change Order shall include all costs related thereto, including all overhead, miscellaneous expenses, and incidentals.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly. No change in Contract Time shall be allowed for Change Orders performed by Contractor, except for substantial changes in scope determined by the Owner. In the case of increased scope, it is expected that Change Order Work shall be performed by increased manpower

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If

(Paragraphs deleted)

unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager and Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be the basis for preparing a Change Order for final Owner approval.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, Owner in consultation with the Construction Manager and Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Owner and Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers compensation insurance;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Owner, Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured in accordance with Section 7.2.2.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. If Owner accepts such request in its sole discretion and subject to any qualifications regarding such acceptance, the Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to

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be reasonably justified, which amount shall be subject to Owner's acceptance in its discretion. To the extent Contractor does not request payment for Work completed under the Construction Change Directive in Applications for Payment (pending final determination of the total cost of a Construction Change Directive to the Owner), or to the extent Owner does not accept a Contractor request for payment for such Work, Contractor shall perform such Work without payment, subject to its rights to pursue a Claim for such as provided in and subject to Article 15 and other applicable provisions of the Contract Documents. Any refusal by the Contractor to commence or perform any disputed Construction Change Directive Work or any other disputed Work for which it Claims or requests a Change Order, as directed by Owner, shall constitute a material breach of this Contract by Contractor.

§ 7.3.10 Agreement to any Change Order (whether resulting from Change Order request/Claim by Contractor or Construction Change Directive or otherwise) shall constitute a final settlement by Contractor of all matters arising out of or relating to the change in the Work which is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and/or the Contract Time.

§ 7.4 Minor Changes in the Work

The Owner, through the Construction Manager or the Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Construction Manager's or Architect's order for minor changes shall be in writing and shall be binding on the Contractor.

§ 7.5 Field Orders

§ 7.5.1 Field Orders are an interpretation of the Contract Documents or an order to do minor changes in the Work. Since time is of the essence, Contractor shall promptly complete the Work directed in the Field Order. Field Orders shall provide the means to a written order described in 7.4. Failure to proceed with a Field Order, which will adversely impact the completion of the project or delay the work of another contractor, shall be just cause for the Owner taking over the Work, or termination of Contract.

§ 7.5.2 Field Orders are not to be construed as Change Orders. A signed Field Order is not an approved Change Order.

§ 7.5.3 Neither the Owner, Architect nor Construction Manager shall sign field tickets, work orders or any other document prepared by the Contractor. Should the Contractor desire to record extra work performed, the Contractor may request that the work be monitored by the Construction Manager and submit a copy of the field ticket/work order immediately upon completion of such work. The Contractor may also request a copy of the Construction Manager's log.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8. Work remaining to be completed after Substantial Completion shall be limited to items which can ordinarily be completed within the period between the payment at the time of Substantial and Final payment.

§ 8.1.3.1 "Milestone Dates" are dates critical to the Owner's operations that establish when a part of the Work is to commence or be complete. All Milestone Dates, to the extent that there are any in the Project Schedule, are of the essence and shall have the same meaning as the Required Substantial Completion Date for the purpose of Liquidated Delay Damages in this Article 8. Liquidated damages applied to Substantial Completion shall apply likewise to Milestone Dates when completion requirements for such are missed and shall be incurred until the completion requirements for such Milestone Dates are actually achieved.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

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§ 8.1.5 The Date of Final Completion of the Work is the date all of the Work required under the Contract Documents is completed, and all applicable licenses, permits, certificates, or approvals have been obtained by the Contractor and delivered to the Owner to the extent provided for in the Owner-Contractor Agreement.

§ 8.1.6 Regular School Hours shall mean the time school is in session on any given day. Off Regular Hours shall mean all other time during the day. Regular School Days shall mean days school is in session. (See school calendar)

§ 8.1.7 Refer to Article 12 of the Project Labor Agreement for provisions on Hours of Work, Premium Payments, Shifts and Holidays.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work. Contractor recognizes that the Project Schedule is of critical importance to the Owner. All aspects of construction must reflect that 'TIME IS OF THE ESSENCE' to the Owner.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. Failure to prosecute the Work diligently, using such means and methods of construction consistent with the requirements of this Contract to ensure that the Work of the Project meets all Milestone Dates shall jeopardize the overall Project Schedule. This failure will mandate Contractor to increase staff, work overtime, or use other means to recover time, at the costs of Contractor. In addition, all costs due to delays in completion of the Work shall be borne by the Multiple Prime Contractor(s) responsible for delays.

§ 8.2.3.1 Contractor shall cooperate with the Owner, Architect, Engineer, Construction Manager and other Contractors on the Project, making every reasonable effort to reduce the Contract Time.

§ 8.2.4 The Contractor may request access to the site during times beyond the work hours permitted. Approval is solely at the discretion of the Owner. If approval is given, the Contractor is responsible for paying all additional costs incurred by the Owner, Architect and Owner's Representative for providing the site to the Contractor during the additional time periods.

§ 8.3 Delays and Extensions of Time

§ 8.3.1

Absent Contractor's breach of contract or negligence in the performance of its Work and obligations under this Contract, Contractor shall be entitled to a time extension pursuant to a Change Order signed by Owner in the amount of time determined by Owner in its reasonable discretion to be appropriate for delays caused by the following occurrences, but only if such delays are proven to Owner in its reasonable discretion to demonstrably affect the critical path of the Project Schedule as relating to the Work of this Contract: the consequences of Acts of God (such as tornado, flood, fire, hurricane, etc.); unusually adverse weather; industry-wide labor strikes or industry-wide material shortages; wars or acts of terrorism; rebellion; riot; civil disobedience; embargoes; sabotage; stop work orders issued or other action or inaction by governmental or other authorities having jurisdiction over the Project or the Work and outside the reasonable control of Contractor; the presence of hazardous materials that are not the responsibility of the Contractor nor about which Contractor does not reasonably have knowledge at the time of execution of the Contract; non-compliance of the Drawings and Specifications with laws, statutes, regulations and other legal requirements (unless otherwise the responsibility of the Contractor pursuant to the Contract Documents); changes to laws, statutes, regulations and other legal requirements after execution of this Agreement (unless otherwise the responsibility of the Contractor pursuant to the Contract Documents); actions or inactions of the Construction Manager, Architect, the other Multiple Prime Contractors, Owner's other contractors, or Owner which occur through no fault of the Construction Manager; the Construction Manager's or Architect's failure to reasonably furnish instructions or Drawings or to reasonably act on submissions through no fault of Contractor; or events outside the reasonable control of Construction Manager (for which it is not contractually responsible) which could not have been reasonably foreseen by Contractor in the development of the Project Schedule for the Work of this Contract (collectively "Contemplated

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Delays"). If the Contractor is delayed at any time in the commencement or progress of the Work by any Contemplated Delay, then the Contractor shall submit a Claim for an extension of the Contract Time as set forth in Section 8.3.2 and its subsections, and, for Claims not waived by Contractor by operation of Article 8 or Article 15 or other applicable provisions of the Contract Documents, the Contract Time may be extended by Change Order for such time as the Owner may determine in its sole reasonable discretion. No such Change Order extending the Contract Time, however, shall result in any increased payments to the Contractor for overhead, extended overhead, or for any other amounts of any nature whatsoever (see Section 15.1.5 and its subsections).

§ 8.3.1.1 An extension of time shall be only for the number of days of delay which the Architect may determine to be due solely to the causes set forth in the application for extension of time. The Contractor shall not be entitled to receive a separate extension of time for each one of several causes of delay operating concurrently; but if at all, only the actual period of delay as determined by the Architect.

§ 8.3.1.2 The Contractor shall be responsible for labor peace on the Project and shall at all times exert its best efforts and judgment as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes, or strikes where reasonably possible and practical under the circumstances and shall, at all times, maintain Project wide labor harmony. The Contractor shall be liable to the Owner for all damages suffered by the Owner occurring as a result of work stoppages, slowdowns, disputes or strikes except as specifically provided for elsewhere in these Conditions.

§ 8.3.1.3 All costs for expedited material procurement to meet the schedule shall be the responsibility of the Contractor.

§ 8.3.2 Time Limits and other Requirements for Contractor's Notice of Claims for Extension of Contract Time for Contemplated Delay. Notwithstanding anything contained elsewhere in the Contract Documents to the contrary, it is a condition precedent to Contractor's ability to pursue any Claim for extension of Contract Time that the Claim must be initiated by written notice by Contractor to the Owner with a copy sent to the Construction Manager and Architect in strict compliance with the requirements of this Section 8.3.2 (and its subsections). So that the Owner can properly investigate the Claim, TIME IS EXPRESSLY OF THE ESSENCE WITH RESPECT TO CONTRACTOR'S GIVING OF NOTICE OF CLAIM TO OWNER WITH THE INFORMATION AS PROVIDED HEREIN AS A CONDITION PRECEDENT TO ITS ABILITY TO ASSERT OR OTHERWISE PURSUE ANY CLAIM FOR EXTENSION OF THE CONTRACT TIME.

§ 8.3.2.1 Any Claim for Contract Time extension relating to an Contemplated Delay shall be made by Contractor to Owner in writing, with a copy sent to the Construction Manager and Architect, within seven (7) days after Contractor knew or should have known of the cause of the delay and its impact to the critical path item affected; with such written notice advising Owner of the existence, nature and effect of such condition, occurrence, or event upon the approved Project Schedule as relating to Contractor's Work, and must state why and in what respects, if any, the condition is causing or may cause a delay along with demonstrable proof of the alleged impact on the critical path of the approved Project Schedule as relating to Contractor's Work. Contractor's Claim shall suggest strategies to Owner to mitigate the effect of any such delay including without limitation overtime, re-sequencing and other remedial methods.

§ 8.3.2.2 No Claim for extension of the Contract Time due to weather conditions will be considered unless accompanied by documentary evidence showing that such weather is unusually severe and abnormal for the past 50 years and could not have been reasonably anticipated (or reasonably protected against), and unless the weather conditions had an adverse effect on the critical path of the Project Schedule as relating to Contractor's Work.

§ 8.3.2.3 Failure of the Owner to respond in writing within thirty (30) days following delivery of Contractor's written notice required by this Section 8.3.2 and its subsections shall be deemed a rejection of the Claim.

§ 8.3.2.4 Failure of the Contractor to strictly comply with the requirements of Section 8.3.2 (and its subsections) shall be deemed a conclusive waiver by the Contractor of any and all Claims for damages for delay and/or extension of the Contract Time regarding delay arising from such conditions, occurrences or events.

§ 8.3.2.5 The determination of the Owner regarding any Claim for an extension of Contract Time by notice of delay as provided herein shall be binding and conclusive on the Contractor.

§ 8.3.2.6 Permitting the Contractor to continue with the Work after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the Contractor after such time, shall in no way operate as a waiver on the part of the Owner of any of its rights under this

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§ 8.3.2.7 When the Contract Time has been extended, as provided under this Section 8.3, such extension of time shall not be considered as justifying extra compensation to the Contractor for administrative costs of other similar reasons.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by Owner under other provisions of the Contract Documents.

§ 8.3.4 In no event shall the Contractor be entitled to damages for delay under the Contract (see Section 15.1.5 and its subsections).

§ 8.3.5 To the extent the Contractor is required to work during overtime hours, weekends, holidays or at other times which are not regularly scheduled, due to the fault of the Contractor, or where Contractor requests to work during these periods to facilitate its schedule, the Contractor shall be responsible for the costs incurred by the Owner, the Construction Manager, the Architect and/or others attributable to working during periods which have not been ordinarily scheduled.

§ 8.4 Liquidated Delay Damages. IT IS AGREED THAT TIME IS OF THE ESSENCE IN THE PERFORMANCE OF THIS AGREEMENT. IN THE EVENT CONTRACTOR FAILS TO ACHIEVE SUBSTANTIAL COMPLETION OF THE WORK BY THE REQUIRED SUBSTANTIAL COMPLETION DATE, CONTRACTOR AGREES TO PAY OWNER LIQUIDATED DELAY DAMAGES AS SET FORTH HEREIN. Contractor acknowledges that the date for Substantial Completion of the Work as required under the Contract Documents is of the foremost importance and that its failure to achieve Substantial Completion of the entire Work of its Contract for the Project no later than the Required Substantial Completion Date set forth in Section 3.3 of the Agreement and the approved Project Schedule (as may only be adjusted per the terms of this Contract) will result in extreme hardship to Owner and will irreparably interfere with Owner's obligations and commitments, and that it would be extremely difficult and impractical to ascertain and fix the actual damages the Owner would incur. Accordingly, the Parties hereby stipulate and agree that if Contractor shall fail to achieve the Required Substantial Completion Date, Contractor shall be assessed the agreed upon liquidated damages amount of Five Hundred and 00/100 Dollars (\$500.00) per day commencing on the first day after the Required Substantial Completion Date, as such amount is agreed to be the amount of damages Owner would sustain and such amount shall not be construed as a penalty but as liquidated damages for breach of contract as a reasonable estimate of the damages Owner will suffer as relating to such delay ("Liquidated Delay Damages"). Such Liquidated Delay Damages shall not be in lieu of or related Owner's actual damages relating to deficiencies or defective Work or to other breaches of the Contract separate from delayed completion. Liquidated Delay Damages shall begin to accrue when the Work under this Contract is not complete by the Required Substantial Completion Date applicable hereto and shall continue to accrue until the date on which the Work of the entire Contract is complete. Liquidated Delay Damages shall also begin to accrue when the Work under the Contract is not completed by any earlier Milestone Dates, as indicated on the agreed upon and approved Project Schedule. Such Liquidated Delay Damages may be withheld from progress payments at Owner's sole discretion.

§ 8.4.1 No Release. It is further expressly agreed and understood that Owner's assessment of Liquidated Delay Damages is intended to compensate Owner solely for Contractor's failure to meet the Required Substantial Completion Date deadline (and any earlier Milestone Dates) and shall not release Contractor from liability from any other breach of requirements set forth in any of the Contract Documents, including, without limitation, any failure of the Work to conform to applicable requirements.

§ 8.5 Acceleration Due to Contractor Delay – Extraordinary Measures

§ 8.5.1 **Extraordinary Measures:** In the event the Owner determines that the performance of the Work, relative to the Contract Time required for the Required Substantial Completion Date and/or earlier Milestone Dates for the Project Schedule as relating to the Work of this Contract has not progressed or reached the level of completion required by the Contract Documents, and such delayed performance was not caused by a delay for which the Owner in its reasonable discretion has agreed to an extension of Contract Time pursuant to Section 8.3.1 above, the Owner through the Construction Manager shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction of the Work ("Extraordinary Measures"). The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the Project Schedule for the Work of this Contract relating to delayed performance for which the Contractor has not developed alternative recovery plans acceptable to the Owner. The Owner's right to order the Contractor to take corrective Extraordinary

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Measures pursuant to this Section 8.5.1 include, without limitation: (1) working additional shifts or overtime; (2) supplying additional manpower, equipment and facilities; and (3) other similar measures. Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Project Schedule for the Work of this Contract.

§ 8.5.2 The Contractor shall not be entitled to an adjustment to the Contract Sum in connection with Extraordinary Measures required by the Owner pursuant to this Section 8.5 and its subsections.

§ 8.5.3 The Owner may exercise the rights furnished the Owner under or pursuant to this Section 8.5 and its subsections as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with the Required Substantial Completion Date (and any earlier completion milestones) set forth in the Project Schedule for the Work.

§ 8.5.4 Any rights conferred on the Owner pursuant to this Section 8.5 and its subsections or in any other portion of the Contract Documents shall neither require Owner to exercise such rights for the benefit of itself or the Contractor or any other person or entity or, nor shall they make Owner responsible in any way whatsoever for the Contractor's obligation to complete the Work of the Contract by the Required Substantial Completion Date in conformance with the Project Schedule.

§ 8.5.5 Any refusal by the Contractor to commence or perform such acceleration/expedited Work when appropriately requested by Owner pursuant to this Section 8.5 (and its subsections) shall constitute a material breach of this Contract by Contractor.

§ 8.6 Acceleration for Owner's Convenience. At the Owner's option, the Contractor shall Work additional shifts or overtime, and/or supply additional manpower, equipment and facilities, and/or take other similar measures as directed by the Owner in writing and the Owner shall have the right to expedite the Work, even out of sequence. Provided the Contractor is: (i) not behind in the progress of its Work (see Section 8.5 and its subsections above), and (ii) not otherwise in default of any of the provisions of the Contract Documents; the Owner shall reimburse the Contractor for the actual out of pocket additional labor costs (i.e., additional wages, fringe benefits, insurance) associated with such acceleration and/or overtime Work. Time slips covering said additional wages must be submitted by Contractor and checked and approved by the Construction Manager on a daily basis. Any refusal by the Contractor to commence or perform such overtime Work shall constitute a material breach of this Contract by Contractor.

§ 8.6.1 If the Owner demands acceleration pursuant to this 8.6 and its subsections it shall only be in writing with an express identification that acceleration for Owner's convenience is demanded pursuant to this Section 8.6 and its subsections. Any other demand or request for acceleration shall be deemed to be under Section 8.5 and its subsections (Extraordinary Measures) at no cost to Owner. In the event that Contractor believes that some action of the part of Owner constitutes an acceleration directive under Section 8.6 and its subsections, the Contractor shall immediately notify Owner in writing that Contractor considers the actions as an acceleration directive. This written notification shall detail the circumstances of the claimed acceleration directive. Failure of Contractor to deliver such written notice to Owner prior to commencement of any acceleration efforts shall be deemed as a conclusive representation by Contractor that it agrees that any such activities and efforts are required by the Contract Documents as part of its base Work and/or are provided pursuant to Section 8.5 above and its subsections at no cost to Owner and no adjustment of the Contract Sum, and Contractor agrees that is shall be forever estopped from asserting otherwise. The Contractor shall not accelerate its efforts until the Owner responds in writing to the written notification. If acceleration is then directed or required by the Owner, all cost records relating thereto above shall be maintained by the Contractor and provided to the Owner through the Construction Manager on a daily basis.

§ 8.6.1.1 The Contractor shall keep cost and other Project records related to any acceleration directive separately from normal Project costs and records and shall provide a written record of acceleration cost to the Owner through Construction Manager on a daily basis.

§ 8.6.1.2 As a further requirement in order to preserve a claim to recover additional costs due to acceleration, the Contractor must document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will be only overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will be only the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.1 Notwithstanding anything to the contrary contained in the Contract Documents, the Owner may withhold any payment to the Contractor hereunder if the Owner determines in its sole discretion that the Contractor has failed to adequately perform its Work or is otherwise in default under any of the Contract Documents; provided, however, that any such withholding shall be limited to an amount (as determined by Owner in its sole discretion) sufficient to cure any such default or failure of performance by the Contractor and is otherwise in compliance with applicable law.

(Paragraph deleted)

§ 9.2 Schedule of Values

The Contractor shall submit a schedule of values to the Construction Manager, before the first Application for Payment, a "Schedule of Values" allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. The Schedule of Values submitted by Contractor will be adjusted as required by Construction Manager or Architect as necessary for their approval. This schedule, once approved by the Construction Manager and Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Construction Manager shall forward to the Architect the Contractor's (and the Multiple Prime Contractors') Schedule of Values. The Schedule of Values shall be provided on the AIA G702 form and no payments will be made to Contractor until such billing breakdown and initial submissions are approved.

§ 9.2.1 The Contractor and each Subcontractor shall prepare a trade payment breakdown for the work for which it is responsible, such breakdown being submitted on a uniform standardized form approved by the Architect and Owner (AIA G703). The form shall be divided in detail sufficient to exhibit area, floors, and/or sections of the Work, and/or by convenient units and shall be updated as required by either the Owner or the Architect as necessary to reflect (1) description of Work (listing labor and material separately), (2) total value, (3) percent of the Work completed to date, (4) value of the Work completed to date, (5) percent of previous amount billed, (6) previous amount billed, (7) current percent completed, and (8) value of Work completed to date. Any trade breakdown that unreasonably fails to include sufficient detail is unbalanced or exhibits "front loading" of the value of the Work shall be rejected. If trade breakdown had been initially approved and subsequently used, but later found improper for any reason, sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve (exclusive of normal retainage) to complete the Work. Breakdown shall include multiple construction sites, multiple locations within each site, additions vs. renovation work, etc. as required to satisfy State Education Department requirements.

§ 9.3 Applications for Payment

§ 9.3.1 On a monthly basis, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the Schedule of Values, for completed portions of the Work in compliance with all requirements of Article 5 of the Agreement (modified AIA Document A132-2009) and elsewhere in the Contract Documents.. Such application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment as the Owner, Construction Manager or Architect may require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and material suppliers, and shall reflect retainage as provided for in the Contract Documents. Each item listed in the Application for Payment shall have a separate amount for labor and a separate amount for material and other costs.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 Until final completion and acceptance of the Work in accordance with Section 9.10, the Owner shall pay ninety-five (95%) percent of the amount of each progress payment due the Contractor, minus monies withheld for any duly filed liens against said Contractor, provided that a valid performance bond has been furnished and is in full force and effect at the time when periodic payments are due. Otherwise, progressive payments shall be paid at the ninety

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(90%) percent amount of each progressive payment due the Contractor, minus monies withheld for any duly filed liens against the Contractor.

§ 9.3.1.4 Applications for Payment must be accompanied by any and all releases of liens for previous applications from Contractor and his Subcontractors and a sworn and notarized statement that all subcontractors have been paid to at least ninety-five percent (95%) of previously requisitioned sums. As-built drawings showing all Work up to the time of the Request for Payment shall be prerequisite for making payment.

§ 9.3.1.5 Contractors must submit separate Applications for Payment for each facility or per State Education Department Number. Only one Application for Payment may be submitted for payment for each month.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing and under such terms as required by Owner in its sole discretion. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site. Such payment by the Owner for materials, equipment, fixtures and supplies stored on or off the Site shall not relieve the Contractor of its responsibility to provide reasonable protection of said materials, equipment, fixtures and supplies until their incorporation into the Work.

§ 9.3.2.1 Without limitation to the generality of Section 9.3.2: (i) Contractor shall obtain the consent of any Surety to the extent required prior to payment for any materials stored off the Project site; (ii) representatives of the Owner shall have the right to make inspections of the storage areas at any time; and (iii) Such materials shall be (1) protected from diversion, destruction, theft and damage to the satisfaction of the Owner, (2) specifically marked for use on the Project, and (3) segregated from other materials at the storage facility.

§ 9.3.2.2 Procedures required by Owner shall include, but are not necessarily limited to, submission by the Contractor to the Architect of bills of sale and bills of lading for such materials and equipment, provision of opportunity for Architect's visual verification that such materials and equipment are in fact in storage, and, if stored off-site, submission by the Contractor of verification that materials and equipment are stored in a bonded warehouse.

§ 9.3.2.3 All such materials and equipment, including materials and equipment stored on-site but not yet incorporated into the Work, upon which partial payments have been made shall become the property of the Owner, but the care and protection of such materials and equipment shall remain the responsibility of the Contractor until incorporation into the Work, including maintaining insurance coverage on a replacement cost basis without voluntary deductible.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.3.3.1 The Contractor shall save and keep the Owner and the Owner's property free from all liens and claims, legal or equitable, arising out of Contractor's work hereunder. In the event any such lien is filed by anyone claiming by, through or under the Contractor, the Contractor shall remove and discharge same within ten (10) days of the filing thereof. The Contractor further expressly undertakes to defend the Indemnitees at the Contractor's sole expense against any actions, lawsuits or proceedings brought against Indemnitees as a result of liens filed against the Work, the site of any of the Work, the Project site and any improvements thereon, payments due the Contractor or any portion of the property of any of the Indemnitees referred to collectively as liens in this Section 9.3.3.1. The Contractor hereby agrees to indemnify and hold Indemnitees harmless against any such liens or claims of lien and agrees to pay any judgment or lien resulting from any such actions, lawsuits or proceedings.

§ 9.3.3.2 The Owner shall release any payments withheld due to a lien or claim of lien if the Contractor obtains security acceptable to the Owner or a lien bond which is: (1) issued by a surety acceptable to the Owner, (2) in form

and substance satisfactory to the Owner, and (3) in an amount not less than One Hundred Fifty percent (150%) of such lien claim. By posting a lien bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under this Section 9.3, including, without limitation, the duty to defend and indemnify the Indemnitees. The cost of any premiums incurred in connection with such bonds and security shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Sum.

§ 9.3.3.3 Notwithstanding the foregoing, the Owner reserves the right to settle any disputed mechanic's or material men's lien claim by payments to the lien claimant or by such other means as the Owner, in the Owner's sole discretion, determines is the most economical or advantageous method of settling the dispute. The Contractor shall promptly reimburse the Owner, upon demand, for any payments to be made other than those made from the retainage under the Owner-Contractor Contract.

§ 9.3.4 In connection with all progress payments, the Contractor shall submit releases/waivers of lien with respect to all Work previously performed and for which payments were made under a preceding application. Beginning with the second payment requisition and with each subsequent payment requisition, Contractor shall furnish to Owner, without limitation, the following documents:

- a. Labor and/or Materials Affidavit
- b. Daily and Weekly Wage Affidavit;
- c. Contractor's Partial Release and Waiver of Lien
- d. Written Certified Payroll information in compliance with applicable laws; and
- e. Additional information required by the Construction Manager Owner and/or any applicable laws, codes, rules and or regulations applicable to the Work of the Contractor.

§ 9.3.5 The Contractor shall submit a "pencil-copy" requisition to the Construction Manager no later than the date as directed by the Construction Manager for work completed up to that day for review with field personnel and for comparison to the Contractor's as-built drawings which shall be updated daily per the General Conditions. After any adjustments are made, the Contractor shall finalize and submit to the Construction Manager no later than the date as directed by the Construction Manager five (5) copies of the requisition, signed and notarized, for the Construction Manager's final approval and signature. The Owner shall make payment within thirty (30) days.

§ 9.4 Certificates for Payment

§ 9.4.1 Pursuant to the procedures and timelines set forth in Article 5 of the Agreement (modified AIA Document A132-2019) and elsewhere in the Contract Documents, after the Construction Manager's receipt of the Contractor's Application for Payment, the Construction Manager and Architect will either issue to the Owner a Certificate for Payment for such amount as the Construction Manager and Architect determine is properly due based upon their respective reviews of same, or notify Owner in writing of the Construction Manager's and/or Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the notice of withholding certification.

§ 9.4.2 Intentionally Omitted.

§ 9.4.2.1 Intentionally Omitted.

§ 9.4.3 The Construction Manager's certification of an Application for Payment shall be based upon the Construction Manager's evaluation of the Work and the information provided as part of the Application for Payment. The Construction Manager's certification will constitute a representation, to and for the benefit of the Owner only, that, to the best of the Construction Manager's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents. The certification will also constitute a recommendation to the Architect and Owner that the Contractor be paid the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and information provided as part of the Application for Payment. The Architect's certification will constitute a representation to and for the benefit of the Owner only, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect.

§ 9.4.6 The issuance of a Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor or other Multiple Prime Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, or that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- .7 any failure to carry out the Work in accordance with the Contract Documents.
- .8 violations of law applicable to the Work which are the responsibility of Contractor;
- .9 erroneous estimates of the percentage of Work performed;
- .10 Contractor's failure to give notice of errors and inconsistencies; or
- .11 failure of Contractor to comply with mandatory requirements for maintaining record drawings (*NOTE* - Contractor may be required to check record drawings each month. Written confirmation that the record drawings are "up-to-date" may be required by the Architect before approval of the Contractor's monthly Application for Payment will be considered).
- .12 any other reasonable grounds for objection or withholding as provided in the agreement or as permitted by law.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld. The Owner shall not be deemed in default by reason of withholding payment while any conditions described in 9.5.1 remain.

§ 9.5.3 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

§ 9.5.4 If the Contractor disputes any determination by the Construction Manager or Architect with regard to any Certificate of Payment, the Contractor nevertheless shall expeditiously continue to prosecute the Work.

§ 9.5.5 The Owner shall not be deemed to be in breach of this Contract by reason of the withholding of any payment pursuant to any provision of the Contract Documents provided either the Construction Manager or Architect has approved the Owner's action, or the Work for which payment is being withheld shall have been rejected by any governmental authority or the Owner.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect. No partial payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or relieve the Contractor of any of its obligations hereunder with respect thereto.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. Notwithstanding anything in the Contract to the contrary, the Contractor shall pay each Subcontractor or materialman as required by New York General Municipal Law Section 106(b), for work performed by the Subcontractor or materialman under this Contract. The Contractor shall include in each of its Subcontracts a provision requiring each Subcontractor to make payment to each of its subcontractors or suppliers for Work performed under this Contract in the same manner and within the same time period as set forth herein.

§ 9.6.3 The Construction Manager may, on request, in writing by a Subcontractor to the Owner, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right but no obligation to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

(Paragraph deleted)

§ 9.7 Failure of Payment

If the Owner does not pay the Contractor within thirty-five days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect and such certified amount is not otherwise appropriately withheld by Owner pursuant to operation any of the terms and conditions of the Contract Documents, then the Contractor may, upon seven (7) additional business days' written notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount appropriately owing has been received. The Contract Time shall be extended appropriately as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents such that the Work shall have been completed and all systems included in the Work shall be operational in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use to the reasonable exclusion of Contractor with only "Punch-List" or minor items remaining which can be corrected or completed without any material interference with Owner's use of the Work. It is a condition precedent to Substantial Completion that the Owner has received all Certificates of Occupancy and any permits, approvals, licenses, and other documents from any governmental authority having jurisdiction thereof necessary for the beneficial occupancy of the Project.

§ 9.8.1.1 When advised by the Contractor that the Work is substantially completed, the Architect and the Contractor shall, within a reasonable time, make a joint inspection of the work and if the Architect shall determine the Work is substantially completed, the Contractor shall submit a substantial completion application.

§ 9.8.1.2 Notifications by the Contractor to the Architect for inspections to confirm Substantial Completion as parts and/or as a whole shall be judiciously made and without abusing said process.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.2.1 When the Work, or major portions thereof as contemplated by the terms of the Contract, has been substantially completed the Contractor shall submit to the Owner through the Construction Manager and the Architect an Application for Payment of the remaining amount of the Contract balance. Upon receipt of such application, the Owner shall approve and promptly pay the remaining amount of the Contract balance less two times the value of any remaining items to be completed and an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. As the remaining items of Work are satisfactorily completed or corrected, the Owner shall promptly pay, upon receipt of a requisition through the Construction Manager and the Architect, for those items less an amount necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged. Any claims, liens and judgments referred to in this subparagraph shall pertain to the Project and shall be filed in accordance with the terms of the applicable Contract and/or applicable laws.

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion. If the Architect and/or Construction Manager are required to perform multiple inspections because the Work fails to comply with the Contract Documents, the amount of compensation paid to the Architect or Construction Manager by Owner for additional services shall be reimbursed by Contractor to Owner and may at Owner's discretion be deducted from payments (or final payment) otherwise payable to Contractor, if available.

- .1 The Architect will perform no more than two (2) inspections to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner is entitled to reimbursement from the Contractor for amounts paid to the Architect for any additional inspections pursuant to Section 9.5.1

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of

Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.8.6 For any uncompleted work at the time of Substantial Completion, the Owner will retain the monetized value of the remaining work, i.e. "punch list", times 200 percent as determined by the Construction Manager, in addition to any duly filed and unresolved liens against the Contractor as per Section 106-b of the N.Y.S. General Municipal Law, which will be released upon notification by the Contractor to the Construction Manager that the Work has been completed to the Architect's satisfaction.

§ 9.9 Partial Occupancy or Use

§ 9.9.1

The occupancy of any portion of the building does not constitute an acceptance of any Work as the Project will be accepted as a whole and not in units, and the building will be occupied during the Project. Such occupancy does not relieve the Contractor from completing the Work within the time period specified.

§ 9.9.2 Unless otherwise agreed upon, any partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents nor does it waive the Owner's right to liquidated damages. Further such occupancy alone shall not determine when Substantial Completion and the performance have been reached.

(Paragraph deleted)

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager will evaluate the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. If the Architect and/or Construction Manager are required to perform multiple inspections because the Work fails to comply with the Contract Documents, the amount of compensation paid to the Architect or Construction Manager by Owner for additional services shall be reimbursed by Contractor to Owner and may at Owner's discretion be deducted from payments (or final payment) otherwise payable to Contractor, if available.

§ 9.10.1.2 The final payment of retained amount due the Contractor on account of the Contract shall not become due until the Contractor has furnished the Owner, through the Architect, completion documents as enumerated below, or as otherwise required in the Contract Documents.

- .1 One (1) hard copies and one (1) electronic Record Set of Drawings showing actual construction of all portions of the Work and incorporating all changes and amendments thereto, as redlined against the 100% Construction Drawings.
- .2 Guarantees and Warranties required by specific Sections of the Specifications.
- .3 Release and Waiver of Claims, conditioned upon Final Payment, by the General Contractor, Subcontractors, Sub-subcontractors and material suppliers.
- .4 All mechanical and electrical installation, operating and maintenance manuals called for under the Specifications.

- .5 All test reports and certifications required under the mechanical and electrical specifications.
- .6 All forms required to be completed by the Contractor by regulatory governmental agencies with two copies delivered to the Architect.
- .7 Shop Drawing submittals in accordance with Article 3.
- .8 Manufacturer's current detailed installation instructions for fire dampers, ceiling radiation dampers, smoke dampers, and duct smoke detectors as applicable to the Project.
- .9 Two(2) copies of the equipment operational and maintenance manuals.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. Additionally, all warranties and guarantees required under or pursuant to the Contract Documents shall be assembled and delivered by the Contractor to the Construction Manager prior to submission of a final Application for Payment. The Construction Manager and Architect shall additionally not issue the Final Certificate for Payment until the all warranties and guarantees have been received, accepted and approved and until the following have occurred:

- .1 the Owner has received the final certificate of occupancy for the Project or that portion of the Project which encompasses the Work of the Contractor, if relevant;
- .2 the Project or that portion of the Project which encompasses the Work of the Contractor has been completed and accepted, and;
- .3 all procedures regarding final payment have been completed and the Owner has received state agency approval (if required) to make final payment, and otherwise all approvals and/or sign-offs have been obtained from any authorities having jurisdiction over the Work or the Project which are required with respect to the Work of this Contract.

§ 9.10.3 Intentionally Omitted.

§ 9.10.4

(Paragraphs deleted)
Intentionally Omitted.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a material supplier, shall constitute a waiver of Claims by that payee.

§ 9.10.6 In the event the Contractor does not achieve Final Completion within thirty (30) days after the date of substantial completion, allowing for any approved extensions of the contract time. Contractor shall not be entitled to any further payment and Contractor hereby agrees that such failure to complete the work within the time set forth above shall constitute a waiver of all claims by the Contractor to any money that may be due. This provision shall not operate as a waiver by the Owner of any claims or remedies of any nature against the Contractor arising out of the Contract.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

§ 10.1.1 Contractor shall submit its site safety and corporate safety policy/program to the Construction Manager in no event later than within two (2) weeks following issuance of a Notice to Proceed or commencement of Work, whichever is earlier. The safety policy/program shall be in conformance with and meet or exceed OSHA standards and other applicable federal, state and local statutes, laws, codes, ordinances, regulations, rules, and lawful orders of public authorities. The safety policy/program shall also include provisions requiring Subcontractors to participate in safety training to acquaint such Subcontractors with the provisions of the Regulations of the Commissioner of Education (Section 155.5) and shall set forth how the Contractor plans to maintain a safe work environment.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and
- .4 construction or operations by the Owner, or other Contractors and .5 the work of the Owner or other separate contractors.

Prior to commencement of the Work, the Contractor shall document existing conditions, record existing damage to construction or property at the site to remain and notify the Construction Manager and Architect of the same in writing.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.2.1 The Contractor agrees in working on the Owner's premises to comply with all applicable codes and safety regulations as they apply to the Work and as set forth in the Occupational Safety and Health Act of 1970 (OSHA), as revised to date.

§ 10.2.2.2 Additional Requirements:

- .1 Ladders and scaffolding shall be in good operating condition. Any damaged ladders, bakers, and rolling scaffolding shall be immediately removed from job.
- .2 Ground properly all electric operated tools.
- .3 Wear protective eye goggles during any cutting, whether by hand or mechanical means.
- .4 Remove nails, screws, bolts and tack strips from floor immediately after demolition.
- .5 Workmen to have proper shoes and clothing as per OSHA recommendation.

§ 10.2.2.3 During the COVID-19 pandemic, other epidemics and any declaration of emergency as a result thereof, the Contractor shall ensure that its employees are provided with and use face masks, exercise social distancing at the workplace and follow any other safety requirements required by federal and state law.

§ 10.2.2.4 The Contractor agrees, in order that the work will be completed with the greatest degree of safety: To conform to the requirements of the OSHA as amended and the Construction Safety Act of 1969 as amended, including all standards and regulations that have been since or shall be promulgated by the governmental authorities which administer such acts, and shall hold harmless the Owner, Owner's Representative, the Construction Manager, the Architect, and all their employees, consultants and representatives from any and all claims, damages, losses, suits obligations, fines, penalties, costs, charges and expenses which may be imposed upon or incurred by or asserted against any of them by reason of any act or omission of such Contractor or any Subcontractor or any person or firm directly or indirectly employed by such Contractor, with respect to violations of OSHA requirements, rules and/or regulations.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings

against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel and give the Owner reasonable advance notice, and shall maintain on the site, a full set of safety instructions relating to all such materials.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If Contractor or any Subcontractor (or any employee or anyone for whom either of them are legally responsible) suffers injury or damage to person or property, notice of the injury or damage, whether or not insured, shall be given to the Construction Manager and Owner within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the Construction Manager and Owner to investigate the matter.

§ 10.2.8.1 The Owner, upon acceptance of the Work, will provide and maintain fire extinguishers on the site for the protection of the new and/or altered construction. Any other special precautions for fire protection necessary for the execution of a Contractor's Work shall be the responsibility of the Contractor requiring same and the cost of such precautions shall be paid for by that Contractor. The Contractor is in no way relieved of its responsibility to abide by the OSHA regulations and for recording and registering accidents by reporting of accidents to the Construction Manager, Architect and to the Owner.

§ 10.2.9 The Contractor shall promptly report in writing to the Owner, Construction Manager and Architect all accidents arising out of or in connection with the Work which cause death, person injury, or property damage, giving full details and statements or any witnesses. In addition, if death, serious personal injuries, or serious property damages re caused, the accident shall be reported immediately by telephone or messenger to the Owner and the Construction Manager.

§ 10.2.10 The Contractor solely assumes the following distinct and several risks whether said risks arise from acts or omissions, whether supervisory or otherwise, of the Owner, of the Construction Manager, of third persons or from any other cause, including unforeseen obstacles and difficulties which may be encountered in the prosecution of the Work, whether said risks are within or beyond the control of the Contractor and whether said risks involve any legal duty, primary or otherwise, imposed upon the Owner or Construction Manager, excepting only risks which arise from fault designs as shown by the plans and specifications or from affirmative acts of the Owner or the Owner's members, officers, representatives or employees committed with intent to cause the loss, damage or injuries hereinafter set forth:

- 1 The risk of loss or damage, includes direct or indirect damage or loss, of whatever nature to the Work or to any plant, equipment, tools, materials or property furnished, used, installed or received by the Owner, the Construction Manager, the Contractor or any Subcontractor, materialmen or workmen performing services or furnishing materials for the Work. The Contractor shall bear said risk of loss or damage until Final Acceptance of the Work by the Owner or until completion or removal of said plant, equipment, tools,

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materials or property from the Site and the vicinity thereof, whichever event occurs last. In the event of said loss or damage, the Contractor immediately shall repair, replace or make good any said loss or damage.

- .2 The risk of claims, just or unjust, by third persons against the Contractor or the Owner, the Architect and the Construction Manager on account of wrongful death, bodily injuries and property damage, direct or consequential, loss or damage of any kind whatsoever arising or alleged to arise out of or as a result of or in connection with the performance by the Contractor of the Work, whether actually caused by or resulting from the performance of the Work, or out of or in connection with the Contractor's operations or presence at or in the vicinity of the Site. The Contractor shall bear the risk for all deaths, injuries, damages or losses sustained or alleged to have been sustained prior to the Final Acceptance of the Work. The Contractor shall bear the risk for all deaths, injuries, damages or losses sustained or alleged to have been sustained resulting from the Contractor's negligence or alleged negligence which is discovered, appears, or is manifested after acceptance by the Owner.
- .3 The Contractor assumes entire responsibility and liability for any and all damage or injury of any kind or nature whatsoever, including death resulting therefrom, to all person, whether employees of the Contractor or otherwise, and to all property, caused by, resulting from, arising out of, or occurring in connection with the execution of the Work. If any person shall make said claim for any damage or injury, including death resulting therefrom, or any alleged breach of any statutory duty or obligation on the part of the Owner, the Architect, the Construction Manager, servants and employees, the Contractor shall assume the defense and pay on behalf of the Owner, the Architect, the Construction Manager, servants and employees, any and all loss, expense, damage or injury that the Owner or Construction Manager may sustain as the result of any claim. The Contractor agrees to assume, and pay on behalf of the Owner, the Architect, and Construction Manager, servants and employees, the defense of any action at law or equity which may be brought against the Owner, the Architect and the Construction Manager, servants and employees. The assumption of defense and liability by the Contractor include, but is not limited to, the amount of any legal fees associated with defending, all costs of investigation, expert evaluation and any other costs including any judgment or interest or penalty that may be entered against the Owner, the Architect and the Construction Manager, servants and employees, in any said action.

§ 10.2.11 Title to all completed or partially completed work at the job site, and to all materials delivered to and stored at said job site which are intended to become a part of the complete work covered by the Contract, shall be in the name of the Owner. Notwithstanding the foregoing, and prior to acceptance of the complete work by the Owner, the Contractor shall be liable for all loss of or damage to said completed work, partially completed work, materials furnished by the Contractor, and materials or equipment, furnished by others, the custody of which has been given to the Contractor, arising from any cause other than those against which the Owner herein undertakes to carry insurance. In the event of loss or damage from cause other than those against which the Owner undertakes to carry insurance, the Contractor shall replace or repair the said work or materials at his own cost and expense.

§ 10.2.12 The Contractor shall sustain any loss or damage arising from the nature of the work to be done under this Contract or from any unforeseen or unusual obstructions or difficulties which may be encountered in prosecuting the work or from the actions of the elements including water, wind and frost. The Contractor shall maintain suitable adequate safeguards to protect all property and personnel, public or private.

§ 10.2.12.1 The Contractor's obligations under this Article shall not be deemed waived, limited or discharge by the enumeration or procurement of any insurance for liability for damages. The Contractor shall notify its insurance carrier within twenty-four (24) hours after receiving a notice of loss or damage or claim from the Owner or Construction Manager. The Contractor shall make a claim on its insurer specially under the provisions of the contractual liability overages and any other overages afforded the Owner or the Construction Manager including those of being an additional insured where applicable.

§ 10.2.13 Smoking and other tobacco use, alcoholic beverages and controlled substances are expressly prohibited on all District properties. Smoking is also prohibited within 100 feet of the boundary of the property of an elementary or secondary school. No reporting to work or being at work impaired by alcohol or controlled substances allowed. The Contractor bears the responsibility of determining if its, or its Subcontractor's employees are impaired which would jeopardize the safety of the public, the employees of other Contractors and their Subcontractors, the Owner, Architect and Construction Manager. All persons representing Contractors, Subcontractors or suppliers shall wear shirts, long pants and other proper attire while on District property. All persons representing Contractors, Subcontractors or

suppliers shall conduct themselves in a manner consistent with the rules and policies of the School District while on District property or otherwise representing this Project. All Contractors, subcontractors, suppliers and their employees must refrain from conversing with school personnel and students. Any construction employees found doing so will be removed from the site. **NO COMMUNICATION BETWEEN WORKERS AND STUDENTS WILL BE TOLERATED.** All Contractors, subcontractors, suppliers, and their employees must refrain from using indecent language - any doing so will be removed from the site. Artwork and decoration found on vehicles belonging to Contractor's or Subcontractor's employees parked on or near the school property which contain indecent language, or pictures or symbols that foreseeably could cause a disruption to the educational environment, shall either be covered or removed from the location. The use of radios, tape players, and the like is prohibited within the Project site

§ 10.2.14 Identification Badges: If required by Owner, Contractor will be provided with one badge for each of their field personnel and workmen and shall follow Construction Manager's or Owner's instructions regarding registration and photo ID issuance upon beginning Work on site. All workmen shall display the badge at all times on site. Replacement of badges will occur for a fee. Failure to wear identification badge at all times will result in the immediate removal from the jobsite

§ 10.2.15 All crane picks, material delivery, etc. must be coordinated so as not to lift over any occupied area of the building. If necessary, this work shall be done on off hours to ensure the safety of the building occupants. Crane location must be carefully chosen to ensure the safety of building occupants. Also, Contractor must provide all engineering for crane sizing and sub-base platforms if necessary.

§ 10.2.16 When all or a portion of the Work is suspended for any reason, the Contractor shall securely fasten down all coverings and protect the Work, as necessary, from injury by any cause; further, Contractor, in connection with its performance of the Work or otherwise, shall not interfere in any manner with the operation of any business adjacent to the Project site including, without implied limitation, any interference with traffic, access or egress, parking and cleanliness. The Contractor shall protect and cause its Subcontractors to protect all work from damage in the event of temporary suspension of the Work.

§ 10.2.17 The Contractor shall take all necessary precautions to insure against fire during construction and be responsible to ensure that the area within Contract limits is kept orderly and clean and that combustible rubbish shall be stored on the site in such a manner and at such locations as designated by Owner to:

- (i) provide and maintain adequate fire protection. The fire protection shall be adequate at all times, and shall be subject to applicable codes and regulations.
- (ii) Comply with regulations, OSHA standards, and codes of local Fire Marshall, agencies, and departments having jurisdictions.

§ 10.2.18 The Contractor shall be required to keep fire alarm operational at all times or provide fire watch approved by Fire Marshal.

§ 10.2.19 The Contractor shall at all times provide the proper housekeeping to minimize potential fire hazards and shall provide approved spark arresters on all steam engines, internal combustion engines and flues.

§ 10.2.20 No fires shall be built on the premises nor shall open flame devices of any kind be employed within the building except for field welding with supervised fire watch.

§ 10.2.21 Free access to fire hydrants and standpipe connections shall be maintained at all times during construction operations, and portable fire extinguishers shall be provided by the Contractor and made conveniently available throughout the construction site. The Contractor shall notify its employees and subcontractors of the location of the nearest fire alarm box at all locations where the work is in progress.

§ 10.2.22 From the commencement to the completion of the Project, the Contractor shall keep the parts of the work and the buildings free from accumulation of water no matter what the source or cause of water.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner, Construction Manager and Architect of the condition in writing.

§ 10.3.2 Upon receipt of the Contractor's notice regarding hazardous materials or substances not addressed in the Contract Documents, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless.. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor and Subcontractors, and their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to reasonable attorneys' fees, arising out of or resulting from performance of the Work in the affected area of hazardous materials or substances not addressed in the Contract Documents if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site The Contractor shall be responsible for materials or substances required by the Contract Documents to the extent of Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 To the fullest extent permitted by law, the Contractor shall indemnify the Owner from and against claims, damages, losses, cost and expense, including but not limited to reasonable attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder), the Owner incurs arising out of or resulting from (1) remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except, in both instances, to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall, to the fullest extent permitted by law, reimburse the Contractor for all cost and expense thereby incurred, except to the extent that the cost and expense are due to the Contractor's fault or negligence.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall obtain, pay for and keep in full force and effect during the entire term of this Contract, and during the performance, final completion and acceptance of any Work, and after the term of this Contract (as may be specified herein) insurance, in a company or companies lawfully licensed to do business in the jurisdiction in which the Project is located, as designated by this Article 11 and any other insurance required by applicable law, regulations, or orders of state, municipality or other entity having jurisdiction over the Work or the Project. Contractor shall not take any action, or omit to take any action that would suspend or invalidate any of the required coverages during the time period such coverages are required to be in effect.

§ 11.1.1.1 Workers' Compensation. and any other federal and/or state coverages as appropriate, including but not limited to: Occupational Disease Benefits, Voluntary Compensation, and Disability Benefits, for not less than the statutory requirements, and if applicable an "Other States Endorsement"; and

Employer's Liability Insurance with limits not less than the statutory requirements or \$1,000,000 (each accident), \$1,000,000 (disease policy limit), and \$1,000,000 (disease, each employee), whichever is greater. Proof of coverage must be on the approved specific form, as required by the New York State Workers' Compensation Board. ACORD certificates are not acceptable.

§ 11.1.1.2 Commercial General Liability Insurance is to be provided under the Insurance Service Office's (ISO) most current form, on a project specific basis, with limits not less than the following required limits:

Each Occurrence:	\$2,000,000
General Aggregate (per project):	\$4,000,000
Products and Completed/Operations:	\$4,000,000
Personal & Advertising Injury:	\$2,000,000
Fire Damage (any one fire):	\$ 300,000
Medical Expense (any one person):	\$ 10,000

Such insurance shall include the following coverages:

- (i) claims for damages because of bodily injury, occupational sickness or disease, or death;
- (ii) claims for damages insured by usual personal injury liability coverage;
- (iii) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- (iv) premises operations;
- (v) product liability and completed operations, and the policy shall specifically include coverage for two (2) years of extended completed operations coverage, which will commence immediately following the expiration date of the Commercial General Liability policy;
- (vi) owners protective;
- (vii) contractors protective;
- (viii) contractual liability covering liabilities assumed under the Contract (including the tort liability of another assumed in a contract), and including, coverage for claims arising out of construction or demolition operations when working within 50 feet of railroad track;
- (ix) personal injury and advertising injury liability;
- (x) extended bodily injury coverage with respect to bodily injury resulting from the use of reasonable force to protect persons or property;
- (xi) medical payments coverage;
- (xii) broad form property damage liability coverage, including coverage for completed operations;
- (xiii) explosion, collapse, and underground property damage (XCU);
- (xiv) construction means and methods;
- (xv) independent contractors;
- (xvi) Owner and other's identified herein as additional insured to be specifically evidenced as additional insureds via ISO Endorsements GC 2010 and CG 2037.

§11.1.1.3 Comprehensive Auto Liability Insurance, including uninsured/underinsured and medical payment protection, and including all owned, non-owned and hired autos, with a limit of liability of not less than \$1,000,000 each occurrence (combined single limit for personal injury, including bodily injury or death, and property damage).

§11.1.1.4 Umbrella/Excess Policy, providing excess coverage in excess of the limits for the insurance coverages required by Sections 11.1.1.1, 11.1.1.2, and 11.1.1.3 above, with such excess/umbrella coverage being at least as broad as each and every one of the underlying policies), with the provision that coverage shall extend for a period of at

least two (2) years from the date of final completion and acceptance by Owner of all Work; with a minimum limit not less than \$5,000,000 per occurrence/annual general aggregate. In the event the underlying policies have different renewal dates, the Contractor shall ensure that the underlying policies are maintained for the term specified in this Contract.

§ 11.1.2 All insurance shall be written on an occurrence basis. A copy of the additional insured endorsement shall be attached.

§ 11.1.3 Contractor's insurance requirements shall be provided by an insurance carrier licensed to do business in the State of New York and have an A.M. Best Rating of A(-)8 or better as determine in the most recent A.M. Best Publication, or as may otherwise be agreed by Owner.

§ 11.1.4 Insurance coverage to be provided by the Contractor shall state that the Contractor's coverage shall be "primary" and non-contributing to any insurances (or self-insurance), including any deductible, maintained by, or provided to Owner or the other Additional Insureds; and shall contain a Waiver of Subrogation in favor of Owner and the other Additional Insureds, so that in no event shall the insurance carriers have any right of recovery against Owner, the other Additional Insureds, or the agents or employees or either of them; and shall contain a separation of insured provision (severability of interest clause). If the Owner or another Additional Insured has other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis.

§ 11.1.5 In the event that any of the insurance coverage to be provided by the Contractor contains a deductible or self-insured retention, the Contractor shall indemnify and hold the Owner, and any Additional Insured harmless from the payment of such deductible, which deductible shall in all circumstances remain the sole obligation and expense of the Contractor.

§ 11.1.6 The Contractor shall require all Subcontractors to carry the same insurance coverage's and limits of liability as set forth herein and adjusted to the nature of Subcontractors' operations and submit same to the Owner through the Construction Manager for approval prior to start of any Work (notwithstanding the preceding, without written agreement by Owner, Subcontractors' limits of liability coverage shall not, for any reason whatsoever, be less than \$2,000,000 per occurrence and in the aggregate). In the event Contractor fails to obtain the required certificates of insurance from Subcontractor and prove them to Construction Manager and a claim is made or suffered, the Contractor shall, to the fullest extent permitted by law, indemnify, defend, and hold harmless the Owner and the Additional Insureds from any and all claims for which the required insurance would have provided coverage. This indemnity obligation is in addition to any other indemnity obligation provided in the Contract Documents and shall survive the term or earlier termination of the Contract.

§ 11.1.7 **Environmental Impairment Liability (Pollution Insurance) (EIL):** All Contractors and Subcontractors involved with the removal and/or abatement of pollutants (including but not limited to asbestos abatement contractors, lead abatement contractors, roofing contractors, tank removal contractors) are required to maintain a minimum of \$2,000,000 EIL coverage. Owner and all other parties required by this Contract to be Additional Insured and all others identified by Owner as such, shall be included as Additional Insured on any EIL policy on a primary and non-contributing basis.

§ 11.1.8 The Contractor assumes responsibility for all injury or destruction of the Contractor's and Subcontractors' materials, tools, machinery, equipment, appliances, shoring, scaffolding, and personal property of Contractor's and Subcontractors' employees from whatever cause arises. Any policy of insurance secured covering the Contractor's or Subcontractors' property leased or hired by them and any policy of insurance covering the Contractor or Subcontractors against physical loss or damage to such property shall include an endorsement waiving the right of subrogation against the Owner for any loss or damage to such property.

§ 11.1.9 **Additional Insured/Certificate Holder.** The Contractor shall cause the commercial liability and other coverage required by the Contract to include the following as Additional Insureds:

- (i) Newburgh Enlarged City School District;
- (ii) Members of the Board of the Newburgh Enlarged City School District;

- (iii) Jacobs Project Management
- (iv) Collins+Scoville Architecture | Engineering | Construction Management, D.P.C., d/b/a CSArch ; and
- (v) Any directors, partners, members, shareholders, officers, employees, successors, assigns, heirs, affiliates, agents, and representatives of each and any of the foregoing.

Contractor shall also add any other entities and/or individuals as may be required by Owner as Additional Insured.

The certificate holder shall be Newburgh Enlarged City School District unless Owner requires otherwise.

Contractor shall provide an Additional Insured endorsement that expressly names each of the above identified Additional Insureds (non-blanket) and shall ensure that the endorsement does not include language that requires an Additional Insured to have a written contract with the named insured for coverage to apply.

Additional insured status shall be provided by standard or other endorsements that extend coverage to the District/BOCES for on-going operations (CG 20 38) and products and completed operations (CG 20 37). The decision to accept an endorsement rest solely with the District/BOCES. A completed copy of the endorsements must be attached to the Certificate of Insurance

§ 11.1.10 Certificates of insurance acceptable to the Construction Manager and Owner shall be provided to the Construction Manager and filed with the Owner prior to commencement of the Work. A fully completed New York Construction Certificate of Liability Insurance Addendum (ACORD 855 2014/15) must be included with the certificates of insurance. The certificates and the insurance policies shall contain a provision that coverages afforded under the policies will not be allowed to be materially changed or canceled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner via Certified/Registered Mail. If any of the foregoing insurance coverages are required to remain in force after final payment, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

§ 11.1.11 The Contractor acknowledges that its failure to obtain or keep current the required insurance coverage shall constitute a material breach of contract and subjects the Contractor to liability for damages the Owner (or others, including without limitation the other Additional Insured) sustains as a result of such breach. In addition, the Contractor shall be responsible to the fullest extent permitted by law for the indemnification to the Owner and all Additional Insured of any and all costs associated with such lapse in coverage, including but not limited to reasonable attorneys' fees (and this indemnification obligation shall survive the term or earlier termination of the Contract).

§ 11.1.12 The amount of insurance required by the Contract shall not be construed to be a limitation of the liability of on the part of the Contractor or any of its Subcontractors.

§ 11.1.13 No act or omission of any insurance agent, broker, or insurance company representative shall relieve Contractor of any of its obligations under this Contract.

§ 11.1.14 Notwithstanding anything in Section 11.3 and its subsections to the contrary, the Contractor shall provide insurance coverage for portions of the Work stored off the site, in transit, and stored on the site but not incorporated into the Work on a full replacement cost basis. The Contractor is responsible for all deductible amounts.

§ 11.2 Owner's Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

(Paragraphs deleted)

§ 11.3 Property Insurance

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless

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otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in the Contract Documents or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for the Architect's, Contractor's, and Construction Manager's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles, unless the underlying loss is caused in whole or in part by Contractor or any of its Subcontractors or anyone for whom either of them are responsible, then, the Contractor shall pay such costs of deductibles.

§ 11.3.2 **Loss of Use Insurance.** The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused.

(Paragraphs deleted)

§ 11.3.3 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.4 If during the Project construction period the Owner insures properties, real or personal or both, adjoining or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.5 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.5 **Waivers of Subrogation**

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Multiple Prime Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance obtained by the Owner pursuant to this Section 11.3 or other property insurance maintained by Owner applicable to the Work except such rights as the Owner and Contractor may have to the proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, Owner's separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar written waivers each in favor of the other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged. To the extent that a waiver of subrogation is unavailable to the Owner, and the absence of such right of subrogation or the Owner's giving such a waiver would constitute a breach of its insurance policy; then as to the Owner this Section 11.3.5 shall be of no force or effect and no such waiver of subrogation shall be required of Owner.

§ 11.3.6 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.7. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.7 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement.

ARTICLE 11A BONDS

§ 11A.1 PERFORMANCE BOND AND PAYMENT BOND

§ 11A.1.1 The Contractor shall furnish a Performance Bond and a Labor and Material Payment Bond each to be in an amount equal to one hundred percent (100%) of the Contract Sum meeting all statutory requirements of the State of New York, in form and substance satisfactory to the Owner and, without limitation, complying with the following specific requirements:

- .1 Except as otherwise required by statute, the form and substance of such bonds shall be satisfactory to the Owner in the Owner's sole judgment;
- .2 Bonds shall be executed by a responsible surety licensed in the jurisdiction of the Work with an AM Best's rating of no less than A/XII and shall remain in effect for a period not less than two (2) years following the date of Substantial Completion or the time required to resolve any items of incomplete Work and the payment of any disputed amounts, whichever time period is longer;
- .3 The Performance Bond and the Labor and Material Payment Bond shall each be in an amount equal to the Contract Sum;
- .4 The Contractor shall require the attorney in fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney indicating the monetary limit of such power;
- .5 Every Bond under this Section 11.5.1 must display the Surety's Bond Number. A rider including the following provisions shall be attached to each Bond:
 - (1) Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change, or other modification of the Contract Documents. Such addition, alteration, change, extension of time, or other modification of the Contract Documents, or a forbearance on the part of either the Owner or the Contractor to the other, shall not release the Surety of its obligations hereunder and notice to the Surety of such matters is hereby waived.
 - (2) Surety further agrees that in event of any default by the Owner in the performance of the Owner's obligations to the Contractor under the Contract, the Contractor or Surety shall cause written notice of such default (specifying said default in detail) to be given to the Owner, and the Owner shall have thirty (30) days from time after receipt of such notice within which to cure such default, or such additional reasonable period of time as may be required if the nature of such default is such that it cannot be cured within thirty (30) days. Such Notice of Default shall be sent by certified or registered U.S. Mail, return receipt requested, first class postage prepaid, to the Construction Manager, Architect and the Owner.
 - (3) Notwithstanding anything in the Bond to the contrary, the Performance Bond shall not contain a condition that any meeting must be scheduled among Owner, Contractor and its surety, or any combination of them, prior to Owner declaring Contractor in default or prior to Owner terminating Contractor's Contract. Any such language in a Performance Bond shall be null, void and unenforceable.
 - (4) Surety and Contractor shall be liable for the additional costs and expenses incurred by the Owner in relation to the default of the Contractor including but not limited to architectural, engineering and/or consultants fees and disbursements.

§ 11A.1.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

§ 11A.1.3 The Contractor shall deliver the required bonds to the Owner prior to beginning construction activity at the site, but no later than seven (7) days after execution of the Contract. Said bonds shall be issued on form AIA

Document A312.

§ 11A.1.4 The Owner may, in the Owner's sole discretion and without prior notice to the Contractor, inform surety of the progress of the Contractor's Work and obtain consents as necessary to protect the Owner's rights, interest, privileges and benefits under and pursuant to any bond issued in connection with the Contractor's Work.

§ 11A.1.5 If the surety on any Bond furnished by the Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of this Article, the Contractor shall within ten (10) days thereafter substitute another Performance and Payment Bond and surety, both of which must be acceptable to the Owner.

§ 11A.1.6 The Contractor shall keep the surety informed of the progress of the Work, and, where necessary, obtain the surety's consent to, or waiver of: (1) notice of changes in the Work; (2) request for reduction or release of retention; (3) request for final payment; and (4) any other material required by the surety. The Owner, Construction Manager, and Architect shall be notified by the Contractor, in writing, of all communications with the surety. The Owner may, in the Owner's sole discretion, inform surety of the progress of the Work and obtain consents as necessary to protect the Owner's rights, interest, privileges and benefits under and pursuant to any bond issued in connection with the Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to examine prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one (1) year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Article 9, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice after discovery of the condition. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.4. The right of the Owner to require Contractor to correct Work not in accordance with the requirements of the Contract Documents pursuant to this paragraph shall not give rise to any duty on the part of the Owner to exercise this right for its benefit or the benefit of the Contractor or any other person or entity.

§ 12.2.2.2 Without limitation to Section 12.2.2.1, the Contractor shall also furnish maintenance and 24-hour call back service for the equipment provided by it for a period of three (3) months after final completion and acceptance of the Work. This Work shall include all necessary adjustments, greasing, oiling, supplies, and parts to keep any supplied/installed equipment in proper operation except such parts made necessary by misuse, accidents or negligence not caused by the Contractor or any of its Subcontractors.

(Paragraphs deleted)

§ 12.2.2.3. In the judgment of the Owner should any material, equipment or systems require corrective work because of defects in material or workmanship within the (2) Two-year warranty period, or extended warranty periods, the Contractor shall complete all required corrective work within forty-five (45) days of notice. In the event the Contractor does not, in accordance with the terms and provisions of the Contract, complete all corrective work within forty-five (45) days, or comply with and fulfill his warranty obligations, the Owner will notify the bonding company to have such work and/or obligations performed at no additional cost to the Owner at the expense of the bonding company and/or the Contractor. The obligations of the Contractor under the terms and provisions of the Contract shall not however be limited to the surety retained by the Owner pursuant to the provisions of the Contract.

§ 12.2.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.2.6 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.2.7 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.2.8 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located. The parties expressly agree that any claim, dispute, or other controversy of any nature arising out of the Contract or performance of the Work shall be commenced and maintained in New York State Supreme Court located in Orange County, New York.

§ 13.1.1 Historical lack of enforcement of any law, local or otherwise, shall not constitute a waiver of Contractor's responsibility for compliance with such law in a manner consistent with the Contract Documents unless and until the Contractor has received written consent for the waiver of such compliance from the Owner and the agency responsible for the law enforcement.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract in part or as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract. The Contractor shall not assign any monies due or to become due to him under the Contract without the previous consent of the Owner.

§ 13.2.2 The Owner may, without consent of the Contractor, assign if otherwise allowed under applicable law and if the assignee assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Written Notice
(Paragraphs deleted)

§ 13.3.1 All notices and other communications required to be in writing (including without limitation all notices relating to Claims, defaults or termination) shall be deemed to have been duly given or delivered: (i) if delivered by hand to the addresses below against a signed receipt, upon delivery; (ii) if deposited with a nationally recognized and reputable overnight delivery service for overnight delivery to the addresses below, upon one (1) day following deposit with such overnight delivery service (with proof tender); or (iii) if by certified mail, return receipt requested, postage prepaid addressed to the addresses below; upon three (3) business days after it is posted with the United States Postal Service. If the delivery of notice above shall fall on a non-business day or holiday, then delivery of the notice shall be deemed to have been made on the next following business day. All such notices shall be delivered to:

- (i) if to Owner, addressed to:
Newburgh Enlarged City School District
124 Grand St.
Newburgh, NY 12550
Attn: Ms. Kimberly Rohring, Assistant Superintendent, Finance

with a copy to Construction Manager:
Jacobs Project Management
One Penn Plaza, 24th Floor, Suite 24000
New York, New York 10119
Att: Mr. James Lovato

and

- (ii) if to Contractor, addressed to:
[TO BE INCLUDED]

If notice is tendered under the provisions of this Section 13.3 and is refused by the intended recipient of the notice, the notice shall nonetheless be considered to have been given and shall be effective as set forth above.

Either party may designate from time to time, by appropriate written notice to the other parties.

§ 13.4 Rights and Remedies

§ 13.4.1 Except as expressly provided in the Contract Documents, duties and obligations imposed by the Contract Documents on Contractor and rights and remedies available to Owner thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law or in equity, or by other agreement, and such rights and remedies shall survive acceptance of the Work and/or termination of the Contract Documents.

§ 13.4.2 No action or failure to act by the Owner, Construction Manager, or Architect shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

(Paragraphs deleted)

§ 13.5 Tests and Inspections

§ 13.5.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect

timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.5.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.5.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If procedures for testing, inspection, or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, and also including Owner's attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder) arising out of or related to same shall be at the Contractor's expense. The Contractor agrees that the cost of testing services required for the convenience of the Contractor in his scheduling and performance of the Work, and the cost of testing services relating to remedial operations performed to correct deficiencies in the Work shall be borne by the Contractor.

§ 13.5.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.5.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so in a reasonably prompt manner and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5.7 Upon request the Contractor shall deliver test samples of any of the materials specified in these specifications to an independent testing agency. The Owner shall pay for the test of samples, which are found to conform to the specifications. The Contractor shall pay for the tests of samples, which do not conform to the specifications. This shall not relieve the Contractor of his obligations to perform specific tests described elsewhere in these specifications.

§ 13.5.8 Where the specifications require part of the work to be specially tested and approved, it shall not be tested or covered up without timely notice thereof or consent thereto. Should any part of the work be covered up without notice, approval or consent, such part of the work shall be uncovered for examination at the Contractor's expense if the Owner shall so require.

§ 13.5.9 Where operating tests are specified, the Contractor shall test the work as it progresses, on his own account, and shall make satisfactory preliminary tests in all cases before applying for official tests.

§ 13.5.10 Tests shall be made in the manner specified, for the different branches of the work. Each test shall be made on the entire system for which such test is required, wherever practical. In case it is necessary to test portions of the work independently, the Contractor shall do so.

§ 13.5.11 Should defects appear, they shall be corrected by the Contractor and the test repeated until the installation is acceptable.

§ 13.5.12 When notice of tests is to be given to the Architect, it shall also be given to the Construction Manager.

§ 13.6 Interest

Payments due and unpaid under the Contract Documents shall bear interest in compliance with applicable law.

§ 13.7 Time Limits on Contractor's Claims

The Contractor shall commence all Claims and causes of action, including without limitation all notice requirements relating to Claims, whether in contract, tort, or otherwise, against the Owner arising out of or related to the Contract in strict accordance with the requirements of the Contract Documents (including without limitation strict compliance with all conditions precedent to the making of such Claims as required by the Contract Documents) and as required by applicable law, including without limitation within all applicable time periods specified by applicable law. The Contractor waives all claims and causes of action not commenced in accordance with this Section 13.7.

Notwithstanding anything herein or elsewhere in the Contract Documents to the contrary, Contractor shall absolutely and strictly comply with New York State Education Law §3813.

§ 13.8 The Owner shall not be responsible for damages or for loss of anticipated profits or any other damages whatsoever on Work not performed on account of any termination of the Contractor by the Owner or by virtue of the Owner's exercise of its right to take over the Contractor's Work pursuant to this Contract.

§ 13.9 The Owner shall not be liable to the Contractor for punitive damages on account of its termination of the Contractor or any other alleged breach of the Contract between Owner and the Contractor and the Contractor hereby expressly waives its right to Claim such damages against the Owner.

§ 13.10 The Contractor hereby expressly waives any rights it may have in law or in equity to lost bonding capacity as a result of any of the actions of the Owner, the Architect or the Construction Manager taken in connection with the Contractor's Work on the Project.

§ 13.11 The Contractor agrees and acknowledges that payments for the Work have been obtained through obligations or bonds which have been sold after public referendum. In the event the Work is suspended or canceled as a result of the order of any court, agency, department, entity or individual having jurisdiction, or in the event the Work is suspended or canceled due to the fact that a court, agency, department, entity or individual having jurisdiction has issued an order, the result of which is that the aforesaid obligations or bonds are no longer available for payment for the Work, the Contractor expressly agrees that it shall be solely entitled to payment for Work accomplished until a notice of suspension or cancellation is served upon it. The Contractor expressly waives any and all rights to institute an action, Claim, cause of action or similar for any damages it may suffer as a result of the suspension or cancellation of the Work and/or its Contract pursuant to this section.

§ 13.12 It is the intent and understanding of the parties to this Contract that each and every provision of law required to be inserted in this Contract shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is to be deemed to be inserted herein, and if, through mistake or otherwise, any such provision is not inserted, or is not inserted in correct form, then this Contract shall forthwith be deemed amended by such insertion so as to comply strictly with the law.

§ 13.13 Liens. At all times, Contractor shall fully and promptly pay and discharge any and all commitments and claims and to the fullest extent permitted by law, wholly defend, protect, indemnify and hold harmless Owner (and its board members, officers, directors, agents, servants, employees) from and against any and all mechanics' or materialmens' liens or claims by Subcontractors or others in connection with the Work and against all damages, liability, cost and expense arising out of or related thereto (whether direct or consequential notwithstanding any provisions of the Contract to the contrary) and including all reasonable attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder). In connection with the foregoing, all mechanics' or materialmens' liens which relate to the Work of this Contract shall be removed, discharged or bonded by Contractor within thirty (30) days of notice from Owner. If Contractor fails to commence the process to discharge or remove the lien within 5 business days after notice of the lien, and notify Owner thereof in writing, or if Contractor thereafter fails to diligently prosecute such discharge or removal to the satisfaction of Owner in its sole discretion, Owner shall, without limitation to Contractor's full indemnification obligation under this Section, have the right to remove, discharge or bond such lien and deduct the cost thereof (including the amount paid or bonded plus reasonable attorneys' fees and disbursements) from any payment due the Contractor.

§ 13.14 No assignment, transfer, conveyance, subletting or other disposition of all or any part of the Contract, or of any of the moneys due or to become due thereunder, or of any right, title or interest therein by Contractor to any person or entity will be permitted or allowed without the previous consent, in writing, of the Owner.

§ 13.15 There are no specific participation goals to be met. However, the Contractor will make good faith effort to solicit subcontractors and material suppliers that are Minority Owned Business Enterprises, Women Owned Business Enterprises and Service-Disabled Veteran Owned Businesses certified in New York State. Evidence of good faith efforts is required.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract in the manner provided herein below if the Work is stopped for a period of ninety (90) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped; or
- .3 Because Contractor has appropriately stopped Work pursuant to Section 9.7 of these General Conditions

§ 14.1.2 The Contractor may terminate the Contract in the manner provided hereinbelow if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon fourteen (14) days' notice to the Owner, Construction Manager and Architect, terminate the Contract unless (but not in the instance the event in Section 14.1.2 is applicable) such reason is cured prior to the expiration of said notice period (or if such breach by its nature cannot be cured within such notice period, Owner has diligently commenced to cure such breach and in good faith continues to complete such cure), and recover from the Owner only payment for Work executed (including reasonable overhead and profit on such Work executed) through the effective date of termination in compliance with the Contract Documents (with the basis for such payment as provided in the Contract Documents), it being agreed and understood, however, that Owner shall incur no other liability to Contractor by reason of such termination, with it being further agreed and understood that the Owner shall not be responsible for or required to pay Contractor for any costs or damages for loss of anticipated overhead and/or profit on Work not performed on account of any termination described in this Section 14.1 and its subsections.

(Paragraph deleted)

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
- .4 fails to furnish the Owner with assurances satisfactory to the Owner evidencing the Contractor's ability to complete the Work in compliance with all of the requirements of the Contract Documents;
- .5 fails to keep the Project free from strikes, work stoppages, slowdowns, lockouts, or other disruptive activity;
- .6 is adjudged a bankrupt or insolvent, or makes a general assignment for the benefit of Contractor's creditors, a trustee or receiver is appointed for Contractor or for any of its property, or files a petition to take advantage of any debtor's act or to reorganize under bankruptcy or similar laws;
- .7 refuses or fails to correct deficient Work performed by it;

- .8 disregards the instructions of the Construction Manager, Architect or Owner (when such instructions are based on the requirements of the Contract Documents); or
- .9 otherwise does not fully comply with the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, , the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety three (3) days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Take possession of materials stored off site by the Contractor;
- .3 Accept assignment of subcontracts pursuant to Section 5.4; and
- .4 Finish the Work by whatever reasonable method the Owner may deem expedient.

The notice provision in this 14.2.2 above is for informational purposes only and it is expressly agreed that Contractor shall have no right to cure.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's and other consultants' services and expenses made necessary thereby, and including Owner's attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder), and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages including Owner's attorneys' fees (and also including, without limitation, attorneys' fees and expenses incurred in any appeals, or any enforcement of the obligations under this provision, or enforcement of any judgment and collection hereunder) exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine. The Contractor shall continue to prosecute that portion of its Work that has not been suspended, delayed, or interrupted, and shall properly protect and secure the portion of its Work so suspended, delayed or interrupted.

§ 14.3.2 The Contract Time shall be adjusted for increases in the time caused by suspension, delay, or interruption under Section 14.3.1 it being expressly agreed that the Owner shall incur no liability to Contractor by reason of such suspension, delay, or interruption except that Contractor may request an extension of its time to complete its Work in accordance with this Contract Documents. No adjustment shall be made to the extent:

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of this Contract ; or
- .3 Contractor waives its right to an adjustment by operation of any other provision of the Contract Documents

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. Termination shall be effective immediately upon delivery of Owner's written notice to Contractor unless specified otherwise by Owner in writing in such notice.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice or for Subcontracts for which Owner accepts assignment as provided in the Contract Documents and

specified in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 If the Contractor's Work is so terminated, the Owner shall not be liable to the Contractor by reason of such termination except that the Contractor shall be entitled to payment for the Work it has properly executed though the effective date of termination in compliance with the Contract Documents, including reasonable overhead and profit on such Work executed (with the basis for such payment as provided in the Contract Documents); it being agreed and understood, however, that Owner shall incur no other liability to Contractor by reason of such termination, with it being further agreed and understood that the Owner shall not be responsible for or required to pay Contractor for any costs or damages for loss of anticipated overhead and/or profit on Work not performed on account of any termination described in this Section 14.4 and its subsections.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition. A "Claim" is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 Time Limits and other Requirements for Contractor's Notice of Claims

It is a condition precedent to Contractor's ability to pursue any Claim that written notice of the Claim by Contractor in strict compliance with the requirements of this Section 15.1.2 must be initiated by written notice to the Owner with a copy sent to the Construction Manager and Architect, within twenty-one (21) days after occurrence of the event giving rise to such Claim or within twenty-one (21) days after the Contractor first recognizes the condition giving rise to the Claim, whichever is later. So that the Owner can properly investigate the Claim, **TIME IS EXPRESSLY OF THE ESSENCE WITH RESPECT TO CONTRACTOR'S GIVING OF NOTICE OF CLAIM TO OWNER AS PROVIDED HEREIN AS A CONDITION PRECEDENT TO ITS ABILITY TO ASSERT OR OTHERWISE PURSUE ANY CLAIM.** The notice of Claim shall set forth: (1) the reasons for which the Contractor believes additional compensation will or may be due or additional time should be granted; (2) the nature of the costs involved; (3) the Contractor's plan for mitigating such costs; (4) if ascertainable, the amount of the potential Claim. For any Claim initiated after the time limit set forth in this Section 15.1.2 or otherwise not in compliance with the information required by this Section 15.1.2, Contractor shall be deemed to have expressly waived any such Claim and shall forfeit any rights that it may have pursuant to this Contract or in law or equity to ever assert or otherwise pursue such Claim. The requirements of this Section are in addition to Contractor's obligation to strictly comply with New York State Education Law §3813.

§ 15.1.3 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. It is understood that a violation of this provision by Contractor shall cause irreparable harm to the Owner.

(Paragraphs deleted)

§ 15.1.4 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

(Paragraphs deleted)

§ 15.1.5 Claims for Additional Time

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided herein shall be given as required by Article 8 of these General Conditions.

§ 15.1.5.2 No Damage for Delay: Contractor acknowledges that delays are common to construction projects of this nature, that the Drawings and Specifications and other Contract Documents for the Project may be incomplete and/or contain errors and discrepancies which will necessitate the issuance of Change Orders to correct existing deficiencies, that changes to the Drawings and Specifications often require extensive and time consuming reviews by many

individuals before they may be approved or ratified, that the processing of Shop Drawings may be inordinately slow, that there may be delay, impact, hindrance or interference from other Prime Contractors or other separate contractors retained by Owner or visitors to the Project site or from directions given or not given by the Construction Manager, Owner or Architect, or any of their consultants, including scheduling and coordination of the Work, and that Contractor may encounter adverse weather conditions or force majeure events, whether or not foreseeable or anticipated (all of which shall be deemed "Contemplated Delays"). Accordingly, and notwithstanding any other provisions of this Subcontract, except to the extent expressly prohibited by law, the Contractor expressly agrees not to make and hereby waives any Claim, and contractually assumes the risk of, any and all loss and expense and damages for delay, interference, hindrance or impact to the progress of its Work, loss of productivity or efficiency, loss of profit, extended home office overhead or any increased costs (including but not limited to increased labor or material costs), for or on account of any delay, obstruction, interference or hindrance, or other impacts to the performance of its Work for any reason whatsoever, including without limitation Contemplated Delays, it being understood the risk for all loss and expense for delay having been anticipated by Contractor's execution of this Subcontract. IT IS EMPHASIZED THAT NO MONETARY RECOVERY MAY BE OBTAINED BY THE CONTRACTOR FOR ANY DELAY AGAINST THE OWNER, OR CONSTRUCTION MANAGER OR ARCHITECT BASED ON ANY REASON AND THAT THE CONTRACTOR'S SOLE REMEDY, IF APPROPRIATE, IS ADDITIONAL TIME FOR COMPLETION OF THE WORK, the amount of which shall be subject to the procedures set forth in this Contract. The intent of this section is to avoid protracted costly litigation as to whether delays, should they occur, were anticipated or unanticipated, foreseeable or unforeseeable, reasonable or unreasonable or as to whether or not they were the fault of Contractor, other Prime Contractors, Owner, Construction Manager, Architect, other contractors or their representatives. Contractor agrees that all such delays, regardless of duration, are within the contemplation of the parties. Contractor has certified that it has considered, as an experienced contractor, the risk of encountering such delays in reaching agreement with Owner on the Contract Sum for the Work.

§ 15.1.6 Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude award of Liquidated Delay Damages, when applicable, in accordance with the requirements of the Contract Documents.

(Paragraphs deleted)

§ 15.2 The Construction Manager, Architect and/or the Owner may, but are not obligated to, notify the Surety, of the nature and/or estimated amount of any Claim that the Owner or others may have against Contractor. If such Claim relates to a possibility of a Contractor's default/termination, the Construction Manager, Architect and/or Owner may, but are not obligated to, notify the Surety and request the Surety's assistance in resolving the controversy.

(Paragraphs deleted)

§ 15.3 Litigation. See Agreement, Article 6.

APPENDIX "A"

PROJECT LABOR AGREEMENT

COVERING CONSTRUCTION

OF

CAPITAL CONSTRUCTION PROJECTS

**NEWBURGH ENLARGED CITY
SCHOOL DISTRICT**

FINAL

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PROJECT LABOR AGREEMENT

PREAMBLE

WHEREAS, Newburgh Enlarged City School District ("NECSD"), desires to provide for the cost efficient, safe, quality, and timely completion of certain construction work described herein relating to the Capital Construction Projects approved by the qualified voters of NECSD on May 21, 2019 ("The Project") in a manner designed to afford the lowest reasonable costs to the NECSD, and the public it represents, and the advancement of permissible statutory objectives;

WHEREAS, NECSD engaged Arace & Company ("Arace") to undertake a study of whether the use of a Project Labor Agreement will best serve the NECSD's interest in obtaining the best work at the lowest possible price, preventing favoritism, fraud and corruption, and other considerations such as the impact of delay, the possibility of cost saving advantages, and any local history of labor unrest; and

WHEREAS, "Arace" Due Diligence Assessment of the Impacts and Implementation of a Project Labor Agreement, (the "study") dated May 20, 2020 ("Report"), concluded that use of a Project Labor Agreement would provide the NECSD with measurable economic benefits and would promote the NECSD's interest in obtaining the best work at the lowest prices as well as preventing favoritism, fraud and corruption; and

WHEREAS, NECSD has carefully reviewed and considered "Arace" Report and determined, among other things, that NECSD's interest in obtaining the best work at the lowest possible price, preventing favoritism, fraud and corruption, preventing the impact of delay, avoiding labor unrest, and gaining measurable management flexibility and benefits are best met by requiring a Project Labor Agreement and, therefore, directs that a Project Labor Agreement be made part of the Project; and;

WHEREAS, this Project Labor Agreement will foster the achievement of these goals, inter alia, by:

- (1) expediting the construction process and otherwise minimizing the disruption to the project;
- (2) avoiding the costly delays of potential strikes, slowdowns, and walkouts arising from work disputes and promoting labor harmony and peace for the duration of the project;
- (3) standardizing the terms and conditions governing the employment of labor on the project;
- (4) permitting flexibility in work scheduling where necessary at affordable pay rates;
- (5) permitting adjustments to work rules and staffing requirements from those which otherwise might obtain;

- (6) providing comprehensive and standardized mechanisms for the settlement of work disputes, including those relating to jurisdiction;
- (7) Promoting work opportunities for those within the district
- (8) ensuring a reliable source of skilled and experienced labor;

WHEREAS, Newburgh Enlarged City School District, has, through independent investigation and analysis, determined the substantial cost savings to the Project shall result from the application of this Agreement; and

WHEREAS, the New York State Building and Construction Trades Council, the Hudson Valley Building & Construction Trades Council, and its affiliated Local Unions and their members, desire to provide for stability, security and work opportunities which are afforded by a Project Labor Agreement; and

WHEREAS, the Parties desire to maximize project safety conditions for both workers and others;

NOW, THEREFORE, the Parties enter into this Agreement:

ARTICLE 1 – PARTIES TO THE AGREEMENT

SECTION 1.1 PARTIES TO THE AGREEMENT

This is a Project Labor Agreement ("Agreement") entered into for all construction as part of the Capital Construction Bond Project (as defined below) between (i) the Newburgh Enlarged City School District ("NECSD") (ii) the Hudson Valley Building and Construction Trades Council ("Council") on behalf of itself and its affiliated Local Unions ("Local Unions"); and (iii) the signatory Local Unions on behalf of themselves and their members.

ARTICLE 2 - GENERAL CONDITIONS

SECTION 2.1 DEFINITIONS

Throughout this Agreement:

- (A) "Union Parties" and "Unions" means the Hudson Valley Building & Construction Trades Council, AFL-CIO and the signatory Local Unions, individually and collectively;
- (B) "Local Union(s)" means the Local Unions signatory to this Agreement, individually and collectively;
- (C) "The Project" means the work to be performed in connection with construction of the Capital Construction Project as more fully set forth in Article 3, Section 3.1.
- (D) "Project Work" means the work covered by this Agreement and fully defined

in Article 3, Section 3.1;

- (E) "Contractor(s)" means any General Contractor, Prime Contractor, Construction Manager (or any Contractor who may serve as a successor in that role), and all other contractors and subcontractors of whatever tier engaged in Project Work within the scope of this Agreement as defined in Article 3;
- (F) "Council" means the Hudson Valley Building & Construction Trades Council, AFL-CIO.
- (G) "Owner" means Newburgh Enlarged City School District ("NECSD").
- (H) "Owner's Representative" means any Construction Manager or other entity designated by the Owner to enter into this Agreement or otherwise act on its behalf.

SECTION 2.2 CONDITIONS FOR AGREEMENT TO BECOME EFFECTIVE

This Agreement shall not become effective unless each of the following conditions are met: (1) the Agreement is signed by the Council and the Local Unions having jurisdiction over the Project Work; (2) the Agreement is approved by the NYS Building & Construction Trades Council (NYSBCTC); (3) the Agreement is approved by the Building & Construction Trades Department (BCTD); (4) the Agreement is authorized by the Owner and (5) the Agreement is signed by the Construction Manager (CM)

SECTION 2.3 ENTITIES BOUND & ADMINISTRATION OF AGREEMENT

This Agreement shall be binding on all signatory Unions and their affiliates and all Contractors performing Project Work as defined in Article 3. The Contractors shall include in any subcontract that they let for performance during the term of this Agreement a requirement that their subcontractors, of whatever tier, become signatory and bound by this Agreement with respect to that subcontracted work performed within the scope of Article 3, and require that each subcontractor, of whatever tier, sign a letter of assent (Schedule B). This Agreement shall be administered by the Designee named by the Owner pursuant to Schedule C.

SECTION 2.4 SUPREMACY CLAUSE

This Agreement, together with the local Collective Bargaining Agreements appended hereto and referred to herein as "Schedule A" represents the complete understanding with respect to the Project and supersedes any national agreement, local agreement, or other collective bargaining agreement of any type which would otherwise apply to Project Work, in whole or in part, with the following exception: to the extent a Contractor is a signatory to the NTL Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, those agreements shall apply.

Notwithstanding this exception, Articles 7, 9, and 10 of this Agreement shall also apply. Where a subject covered by the provisions of this Agreement is also covered by a Schedule A, the provisions of this Agreement shall prevail. If this Agreement is silent on any matter addressed in the applicable Schedule A agreement, the Schedule A agreement shall govern. It is understood that by virtue of having become bound by this Project Labor Agreement, the Contractors will not be obligated to sign any other local, area, or national agreement.

SECTION 2.5 LIABILITY

The liability of any Contractor and the liability of any Union under this Agreement shall be several and not joint. The Contractors, and Subcontractors shall not be liable for any violations of this Agreement by any other Contractor or Subcontractor; and the Council and Local Unions shall not be liable for any violations of this Agreement by any other Union. Notwithstanding the above, every signatory to the Agreement further acknowledges that it will be liable for its own breach, partial breach or otherwise, whether related or not to the breach of another signatory.

SECTION 2.6 THE BID SPECIFICATIONS

The Owner shall require in its bid specifications for all Project Work within the scope of Article 3 that all successful bidders and their Subcontractors of whatever tier become bound by, and signatory to, this Agreement. Every Contractor shall require its Subcontractors, of whatever tier, to execute the Letter of Assent in Schedule B and to become bound by this Agreement.

SECTION 2.7 AVAILABILITY AND APPLICABILITY TO ALL SUCCESSFUL BIDDERS

This Agreement shall be binding on all signatory Unions and their affiliates, and all Contractors, unions and/or non-unions performing Project Work. Unless expressly provided for in this Agreement, this Agreement shall not apply to the work of any Contractor which is performed at any location other than the site of Project Work.

ARTICLE 3 - SCOPE OF THE AGREEMENT

SECTION 3.1 PROJECT WORK

This Agreement shall only apply to Project Work as defined in this Article.

Subject to the exclusions in this Article, Project Work means solely that work performed in connection with construction of the Capital Construction Projects as approved by the Bond vote on May 21, 2019 and included in the contract documents bid on the Capital Construction Projects.

Specifically excluded from coverage under this Agreement is:

(a) all work relating to bids solicited and/or work awarded prior to the execution of this Agreement by the parties and/or approval of it by NECSD,

(b) maintenance and repair work performed in the normal course of NECSD's operations,

(c) any work to be completed by the NECSD or any of its term maintenance contractors and/or vendors,

(d) any computers, work shop equipment tied to computers CNC machines, 3d related equipment, robotic equipment, donated hospital or nursing equipment, printers, monitors, data switching equipment, wireless access points which shall be installed by others (except contractors would install any associated mounting hardware, brackets etc. and provide interconnecting cabling and conduit).

(e) pool construction bid prior to execution of this agreement.

SECTION 3.2 TIME LIMITATIONS

To be covered by this Agreement, Project Work must be awarded after the effective date of this Agreement.

This Agreement shall expire upon completion and acceptance by the Owner of any Project component. The Agreement shall not have further force or effect on such items or areas except where inspections, additions, repairs, modifications, check-out and/or warranty work are assigned in writing (copy to Local Union involved) by the CM for explicit performance under the terms of this Agreement. This Agreement may be extended by written mutual agreement of the parties.

Due to the uncertainty of future funding, uncertainties related or due to the COVID 19 pandemic and the length of the project, the parties to this agreement agree to meet upon notice from NECSD or the construction manager for the purpose of amending the agreement.

SECTION 3.3 EXCLUDED EMPLOYEES

Notwithstanding the provisions of Section 3.1 of this Article, the following person/entities are not subject to the provisions of this Agreement even though performing work on or in connection with the Project:

- a Superintendents, supervisors (excluding general and forepersons specifically covered by a craft's Schedule A), engineers, inspectors and testers, quality control/assurance personnel, timekeepers, mail carriers, clerks, office workers, messengers, guards employed by Owner, technicians, non-manual employees, and all professional, engineering (except field surveyors), administrative and management persons;

- b. Employees of the Project Owner;
- c. Employees and entities engaged in off-site manufacture, modifications, repairs, maintenance, or painting, handling or fabrication of project components, materials, equipment, or machinery or any deliveries including local deliveries of all major construction materials such as fill, ready mix, asphalt, concrete and other aggregates except when any of the above project work is covered under New York State Labor Law 220 (Prevailing Wage) it shall be covered under this Agreement.
- d. Employees of the Construction Manager, except those performing manual, on-site construction labor who will be covered by this Agreement;
- e. Employees engaged in on-site equipment warranty work;
- f. Employees engaged in geophysical testing (whether land or water) other than boring for core samples;
- g. Employees engaged in laboratory or specialty testing or inspections, unless ordinarily done by a member of a Trade Union;
- h. Employees engaged in ancillary Project Work performed by third parties such as electric utilities, gas utilities, telephone companies, and railroads. Utility work provided by gas, electric, and cable companies, which is not performed by utility company employees, shall be subject to the terms of this Agreement.

Unless specifically excluded in this Agreement, all furniture, fixtures, and equipment that are fastened, mounted, or adhered to a surface by glue, screws, nails, mechanical fasteners, or by any other means shall be included as covered work under this Agreement. This shall include all unloading, loading, transporting to place of install, clean-up, uncrating, and unwrapping of protective coverings. The above items that are not fastened, mounted, or adhered to a surface shall be excluded from this Agreement. This shall not preclude the Owner from using respective unions to unload, carry, place, or clean-up of these items, unless such services are performed directly by the Owner or by a vendor working on State Contract which may not be party to this Agreement.

- i. Employees and consultants engaged in security and control services manufacturing and installation if not included in or part of the Contractors contract, except for the installation of conduit-cable related to security and controls which shall be covered work under this agreement.

j. Employees and entities engaged in the removal of all on-site construction debris, waste materials or onsite soils or materials except when this work is covered under New York State Labor Law 220 (Prevailing Wage) it shall be covered under this Agreement.

k. Employees of contractors performing excluded work under Article 3.1d

ARTICLE 4 - UNION RECOGNITION AND EMPLOYMENT

SECTION 4.1 PRE-HIRE RECOGNITION

The Contractors recognize the signatory Unions as the sole and exclusive bargaining representatives of all craft employees who are performing Project Work within the scope of Article 3 of this Agreement.

SECTION 4.2 UNION REFERRAL

- A. The Contractors agree to hire craft employees for Project Work covered by this Agreement through the job referral systems and hiring halls established in the Local Unions' area collective bargaining agreements (attached as Schedule A to this Agreement), where those referrals meet the qualifications set forth in items 1, 2, and 4 of subparagraph B. The Unions agree to provide such craft employees (including apprentices) to all Contractors on a non-discriminatory basis. Notwithstanding this, Contractors shall have sole right to determine the competency of all referrals; the number of employees required; and the selection of employees for layoff (subject to Article 5, Section 5.3). In the event that a Local Union is unable to fill any request for qualified employees within a 48-hour period after such requisition is made by a Contractor (Saturdays, Sundays and holidays excepted), a Contractor may employ qualified applicants from any other available source. In the event that the Local Union does not have a job referral system, the Contractor shall give the Local Union first preference to refer applicants, subject to the other provisions of this Article. The Contractor shall notify the Local Union of craft employees hired for Project Work within its jurisdiction from any source other than referral by the Union. The Local Unions will cooperate with Contractor requests for minority, women, or economically disadvantaged referrals to meet the goals of Article 4, Section 4.4. These workers may be delivered under a "Direct Entry" designation or by use of a Department of Labor waiver.
- B. A Contractor may request by name, and the Local Union will honor, referral of persons who have applied to the Local Union for Project Work and who meet the following qualifications:
- (1) possess any license required by New York State law for the Project Work to be performed;
 - (2) Have worked a total of at least 1000 hours in the construction craft during the

prior two years, and

- (3) Were on the Contractor's active payroll for at least 60 out of the 180 calendar days prior to the contract award.
 - (4) Have the ability to safely perform the basic functions of the applicable trade.
 - (5) Have not committed a felony or misdemeanor, or other violation that would render such person unfit to work on school district property.
- C. Except as specifically addressed in (F) below, no more than twenty (20%) per centum of the employees covered by this Agreement, per Contractor by craft, shall be hired through the provisions of Paragraph B of this section (any fraction shall be rounded to the next highest whole number). Craft forepersons and/or general forepersons shall be included in these twenty (20%) percent. If requested by the appropriate Union, a Contractor utilizing this provision for by-name referrals shall furnish the Union with a written certification that the individuals requested for referral meet the requirements of (1) - (4) above.
- D. The Local Unions shall exert their utmost efforts to recruit sufficient numbers of skilled craft workers to fulfill the manpower requirements of the Contractor. When a contractor of any tier is contracted to perform work on the project and such contractor is not signatory to a Schedule A agreement (not including signatory through this agreement) and the Union cannot provide ample labor to support the construction schedule or project. The contractor shall hire outside the union hiring halls and the contractor shall at their discretion replace the non-union or non-dispatched employee when notified by the union that labor has become available through the union. The contractor shall use other employees affiliated with the Council before hiring except, where specifically addressed in this agreement if those employees from the other unions have the required trade skills to perform the work. Those hired through this provision shall be laid off before those of an affiliated union.
- E. Notwithstanding the foregoing, the NECSD shall have the sole discretion to request that a person be removed from working on this Project.
- F. For work related to construction of the career tech education proprietary equipment as agreed upon by the parties, the contractor, installer or vendor shall hire one company or core employee through the special provisions and at the same time hire one employee hired through the respective union and after 2 employees no more than 33.3% of the employees covered by this Agreement, per Contractor by craft, shall be hired through the provisions of Paragraph B of this section (any fraction shall be rounded to the next highest whole number). Craft forepersons and/or general forepersons shall be included in this 33.3%. If requested by the appropriate Union, a Contractor utilizing this provision for by-name referrals shall furnish the Union with a written certification that individuals requested for referral meet the

requirement of (1) – (4) above.

SECTION 4.3 NON-DISCRIMINATION IN REFERRALS

The Local Unions represent that their hiring halls and referral systems shall be operated in a non-discriminatory manner and in full compliance with all applicable federal, state and local laws and regulations which require equal employment opportunities. Referrals shall not be affected in any way by the rules, regulations, bylaws, constitutional provisions or any other aspects or obligations of union membership, policies, or requirements and shall be subject to such other conditions as are established in this Article. No employment applicant shall be discriminated against by any referral system or hiring hall because of the applicant's union membership, or lack thereof.

SECTION 4.4 WORKFORCE DIVERSITY UTILIZATION

The Unions recognize and acknowledge that workforce diversity of minorities and women are employment goals consistent with our values of fair play. The Local Unions agree and will strive to utilize their best efforts to provide qualified minority and female applicants.

SECTION 4.5 CROSS AND QUALIFIED REFERRALS

The Local Unions shall not knowingly refer to a Contractor an employee then employed by another Contractor working under this Agreement. The Local Unions shall exert their utmost efforts to recruit sufficient numbers of skilled and qualified crafts employees to fulfill the requirements of the Contractor.

SECTION 4.6 UNION DUES

Nothing in this Agreement requires employees to join a union or pay dues or fees to a union as a condition of working on the covered project. This Agreement is not, however, intended to supersede independent requirements in applicable local union agreements as to contractors that are otherwise signatory to those agreements and as to employees of such employers performing covered work.

ARTICLE 5 – UNION REPRESENTATION

SECTION 5.1 LOCAL UNION REPRESENTATIVE

Each Local Union signatory to this Agreement shall be entitled to designate a representative and/or Business Manager who shall be afforded access to the Project site.

SECTION 5.2 STEWARDS

- A. Each Local Union shall have the right to designate from among those referred to the Project a working journey person as a Steward or Lead Engineer and one alternate per shift, and shall notify the General Contractor of the identity of the designated Steward or Lead Engineer (and alternate) prior to the assumption of such duties. Stewards or Lead Engineer shall not exercise supervisory functions and shall receive the regular rate of pay for their craft classifications. There will be no non-working Stewards or Lead Engineer on the Project.

- B. In addition to his/her work as an employee, the Steward or Lead Engineer shall have the right to receive complaints or grievances and to discuss and assist in their adjustment with the Contractor's appropriate supervisor; such activities, however, are not to interfere with the Steward's work unless an emergency situation exists. Each Steward or Lead Engineer shall be concerned with the employees of the Steward's Contractor and, if applicable, subcontractors of that Contractor, but not with the employees of any other Contractor. The Contractor will not discriminate against the Steward or Lead Engineer in the proper performance of Union duties.

SECTION 5.3 LAYOFF OF A STEWARD

Contractors agree to notify the appropriate Union 24 hours prior to the layoff of a

Steward or Lead Engineer, except in cases of discipline or discharge for just cause. If a Steward is protected against layoff by a Schedule A, such provisions shall be recognized to the extent the Steward or Lead Engineer possesses the necessary qualifications to perform the work required. In any case in which a Steward or Lead Engineer is discharged or disciplined for just cause, the Local Union involved shall be notified immediately by the Contractor.

SECTION 5.4 UNION STANDARDS

The Council and its affiliates have a legitimate interest in preventing the undermining of the work opportunities and standards gained through collective bargaining and desire to preserve and protect work opportunities for its members.

NECSD, while recognizing this interest, must maintain its ability to utilize the services of off-site fabricators and those entities involved in deliveries of construction materials when not covered under New York State Labor Law 220.

While the scope of the Agreement is limited to construction as defined, Contractors should whenever economically feasible make reasonable efforts to use union signatory vendors, which includes, but not limited to, UA Yellow Label and SMW Blue Label products for off-site assemblies or fabrications and deliveries of construction materials. The Construction Manager agrees to support efforts to retain as much work as possible.

This article does not refer to construction material normally purchased pre-assembled or manufactures, it references work normally and historically done on-site or in local union fabrications shops.

If any dispute should arise with respect to this Article, the Trades agree to install any off-site assemblies or fabricated items regardless of the source. The parties shall endeavor to settle such dispute in the Labor Management forum or appropriate sub-committee before a grievance is filed under Article 9.

ARTICLE 6 – MANAGEMENT RIGHTS

SECTION 6.1 RESERVATION OF RIGHTS

Except as expressly limited by a specific provision of this Agreement, Contractors retain full and exclusive authority for the management of their operations including, but not limited to: the right to direct the work force, including determination as to the number to be hired and the qualifications therefore; the promotion, transfer, layoff of its employees; or the discipline or discharge for just cause of its employees; the assignment and schedule of work; the promulgation of reasonable Project work rules; and the requirement, timing

and number of employees to be utilized for overtime work. Nothing contained herein shall be construed so as to allow direction of an Employee to perform work outside the jurisdiction of that Employee's Labor Union affiliation, if any. No rules, customs, or practices which limit or restrict productivity or efficiency of the individual (as determined by the Contractor) and/or joint working efforts with other employees shall be permitted or observed.

SECTION 6.2 MATERIALS, METHODS & EQUIPMENT

There shall be no limitation or restriction upon the Owner's choice of materials, techniques, methods, technology or design, or, regardless of source or location, upon the use and installation of equipment, machinery, package units, pre-cast, pre-fabricated, pre-finished, or pre-assembled materials, tools, or other labor-saving devices. Contractors may, without restriction, install or use materials, supplies or equipment regardless of their source. The on-site installation or application of such items shall be performed by the craft having jurisdiction over such work pursuant to an applicable collective bargaining agreement; provided, however, it is recognized that other personnel having special qualifications may participate, in a supervisory capacity, in the installation, check-off or testing of specialized or unusual equipment or facilities as designated by the Contractor.

ARTICLE 7 - WORK STOPPAGES AND LOCKOUTS

SECTION 7.1 NO STRIKES-NO LOCK OUT

There shall be no strikes, sympathy strikes, picketing, work stoppages, slowdowns, demonstrations or other disruptive activity on Project Work site for any reason by any signatory to this Agreement. There shall be no union or concerted or employee activity which disrupts or interferes with the Project Work. Should any employee breach this provision, the Unions will use their best efforts to immediately end the breach and return all employees to work. There shall be no lockout by any signatory to this Agreement.

SECTION 7.2 DISCHARGE FOR VIOLATION

A Contractor may discharge any employee violating Section 7.1, above, and any such employee will not be eligible thereafter for referral under this Agreement for a period of 100 working days.

SECTION 7.3 NOTIFICATION

If a Contractor contends that any Union has violated this Article, it shall notify the Council of such fact, with copies of the notification to the Local Union involved. The Council and Local Union shall instruct, order, and otherwise use their best efforts to cause

the employees to immediately cease and desist from any violation of this Article. The Council shall not be liable for the unauthorized acts of a Local Union or its members. Similarly, a Local Union and its members shall not be liable for any unauthorized acts of its members, the Council, or another Local Union.

SECTION 7.4 EXPEDITED ARBITRATION

Any Contractor or Union alleging a violation of Section 7.1 of this Article or Section 8.3(D)(ii) of Article 8 may utilize the expedited procedure set forth below (in lieu of, or in addition to, any actions at law or equity) that may be brought.

- A. A party invoking this procedure shall notify J.J. Pierson, Neal M. Eiseman and Thomas Hines who shall alternate as Arbitrator under this expedited arbitration procedure. If the Arbitrator next on the list is not available to hear the matter within 24 hours of notice, the next Arbitrator on the list shall be called. Copies of such notification will be simultaneously sent to all parties (the alleged violator, the Council, the Local Union, the Contractor, and the Owner).
- B. The Arbitrator shall hold a hearing within 48 hours of receiving the notice invoking the procedure if it is contended that the violation still exists. The Arbitrator shall provide at least 24 hours' notice (excluding Sundays and holidays) to all parties as to time and place of the hearing.
- C. All notices pursuant to this Article must be delivered to all parties (Local Union, Council, Contractor, alleged violator) and may be provided by telephone, telegraph, hand delivery, fax, email, or confirmed overnight delivery. The hearing may be held on any day including Saturdays or Sundays. The hearing shall be completed in one session which shall not exceed 8 hours duration (no more than 4 hours being allowed to either side to present their case and conduct their cross examination) unless otherwise agreed. A failure of any party to attend the hearing shall not delay the hearing of evidence by those present or the issuance of an award by the Arbitrator.
- D. (i) Section 7.1 hearings:
The sole issue at the hearing shall be whether a violation of Section 7.1 occurred. If a violation is found to have occurred, the Arbitrator shall issue a Cease-and-Desist Award restraining such violation and serve copies on all parties. The Arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages (any damages issue is reserved solely for court proceedings, if any). The Award shall be issued in writing within 3 hours after the close of the hearing, and may be issued without an Opinion. If any involved party desires an Opinion, one shall be issued within 15 calendar days, but its issuance shall not delay compliance with, or enforcement of, the Award.

(ii) Section 8.3(D)(ii) hearings:

The sole issue at the hearing shall be whether a violation of Section 8.3(D)(ii) occurred. If a violation is found to have occurred, it shall be prima facie evidence of intentional mis-assignment, and the Arbitrator shall issue an immediate stop-work order with respect to the work involved and reassign the work as necessary. The Arbitrator is also authorized to (a) award damages or back pay in order to make the aggrieved trade whole, and (b) remove the offending contractor from the job in egregious situations.

- E. An Award issued under this procedure may be enforced by any court of competent jurisdiction upon the filing of this Agreement together with the Award. Notice of the filing of such enforcement proceedings shall be given to all parties. In any court proceeding to obtain a temporary or preliminary order enforcing the Arbitrator's Award as issued under this expedited procedure, the involved Union and Contractor waive their right to a hearing and agree that such proceeding may be commenced by order to show cause. Such agreement does not waive any party's right to participate in a hearing for a final court order of enforcement or in any contempt proceeding.
- F. Any rights created by statute or law governing arbitration proceedings which are inconsistent with the procedure set forth in this Article, or which interfere with compliance thereto, are hereby waived by the Contractors and Unions to whom they accrue.
- G. The fees and expenses of the Arbitrator shall be equally divided between the involved Contractor and Union.

SECTION 7.5 ARBITRATION OF DISCHARGES FOR VIOLATION

Procedures contained in Article 9 shall not be applicable to any alleged violation of this Article, with the single exception that an employee discharged for violation of Section 7.1, above, may have recourse to the procedures of Article 9 to determine only if the employee did, in fact, violate the provisions of Section 7.1 of this Article; but not for the purpose of modifying the discipline imposed where a violation is found to have occurred.

ARTICLE 8 – LABOR MANAGEMENT COMMITTEE

SECTION 8.1 SUBJECTS

The Project Labor Management Committee ("Committee") will meet on a regular basis to: 1) promote harmonious relations among the Contractors and Unions; 2) enhance safety awareness, cost effectiveness and productivity of construction operations; 3) protect the public interest; 4) discuss matters relating to staffing and scheduling with safety and productivity as considerations; and 5) review Affirmative Action and equal employment

opportunity matters pertaining to the Project, if any.

SECTION 8.2 COMPOSITION

The Committee shall be jointly chaired by a designee of the Owner and the Council. It may include representatives of the Local Unions and contractors involved in the issues being discussed. The Committee may conduct business through mutually agreed upon sub-committees.

SECTION 8.3 PRE-JOB CONFERENCE

- (A) So that the start and continuation of work may progress without interruption, the Committee shall require each Contractor and Subcontractor of whatever tier to conduct a pre-job conference with the Council prior to commencing work. The Construction Manager and General Contractor shall be advised in advance of such conferences and may participate if they wish.
- (B) The purpose of the pre-job conference shall be for the parties to gain an understanding of each Contractor's proposed work assignments, the standard work day and work week, the number of employees to be employed, the method of referral, the applicable wage rates and fringe benefit contributions and any other matters in accordance with this Agreement.
- (C) Proposed Trade Assignments. In conjunction with the pre-job conference, each Contractor shall fill out the attached Schedule D – Proposed Trade Assignments identifying all subcontractors and indicating what trades will be used to perform the Project work. This form shall be submitted to the Council at least fourteen (14) days in advance of the commencement of work. If any Local Union(s) objects to or disagrees with the Proposed Trade Assignment of either the Contractor or subcontractor, the Local Union will state its objection and there shall be a good faith discussion among the Contractor or subcontractor and the objecting Local Union and other affected Unions to resolve the matter. If no resolution is reached, any involved Local Union may submit their position in writing, together with support documentation, within seven (7) calendar days to the Contractor or subcontractor with a copy to all affected Local Unions. The Contractor or subcontractor will review all submitted supporting documentation regarding the Proposed Trade Assignments and will submit to the General Contractor, the Council, and all affected Local Unions a "Final Trade Assignment" letter within fourteen (14) days calendar days of the pre-job meeting at which the Proposed Trade Assignments were made.

(D) Disputes and Violations.

- (1) Unresolved disputes concerning trade assignments shall be handled in accordance with Section 10.1, 10.2, and 10.3 of Article 10 in accordance with the National Plan established by the Building and Construction Trades Department, provided however, that disputes concerning intra-trade assignments (assignments between trades within the same International Union) will be determined by the applicable International Union.**

- (2) Failure to conduct a pre-job conference, failure to include all required parties in a pre-job conference, or failure to adhere to agreed-upon Schedule D trade assignments is a violation of this Agreement and prima facie evidence of intentional mis-assignment. Alleged violations of this provision shall be considered a lock-out and subject to the expedited arbitration procedures of Article 7, Section 7.4.**

- (3) All remaining unresolved issues shall be subject to the provisions of Article 9.**

ARTICLE 9 - GRIEVANCE & ARBITRATION PROCEDURE

SECTION 9.1 CLOSE COOPERATION

The Contractors, Unions, and employees, collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of Project Work and agree to resolve disputes in accordance with the grievance-arbitration provisions set forth in this Article.

SECTION 9.2 PROCEDURE

Any question, dispute or claim arising during the term of this Agreement involving the interpretation or application of this Agreement (other than jurisdictional disputes and alleged violations Section 7.1, and Section 8.3(D)(i) or (ii), shall be considered a grievance and shall be resolved pursuant to the following procedure.

Step 1:

- (a) When any employee covered by this Agreement feels aggrieved by a claimed violation of this Agreement, the employee shall give notice of the claimed violation to the Local Union representative or job steward, who shall notify the work site representative of the involved Contractor and the**

General Contractor. To be timely, such notice must be given within 7 calendar days after the act, occurrence or event giving rise to the grievance. The Local Union representative or the job steward shall meet with the work site representative of the involved Contractor and the General Contractor and endeavor to adjust the matter within 7 calendar days after timely notice has been given. The representative of the involved Contractor shall keep the minutes of the meeting and shall respond to the Union representative in writing, with copy to the General Contractor, within twenty-four (24) hours after the conclusion of the meeting. If they fail to resolve the matter within the prescribed period, the grieving party, may, within 7 calendar days thereafter, pursue Step 2 of the grievance procedure by serving the involved Contractor with written copies of the grievance setting forth a description of the claimed violation, the date on which the grievance occurred, and the provisions of the Agreement alleged to have been violated. Grievances and disputes settled at Step 1 are non-precedential except as to the specific Local Union, employee and Contractor directly involved unless the settlement is accepted in writing by the Labor-Management Committee as creating a precedent with respect to Project Work.

- (b) Should any signatory to this Agreement have a dispute [excepting jurisdictional disputes and alleged violations of Section 7.1 or Section 8.3(D)(i) or (ii) with any other signatory to this Agreement and, if after conferring, a settlement is not reached within 7 calendar days, the dispute may be reduced to writing and the grieving party may proceed to Step 2 in the same manner as outlined in subparagraph (a) for the adjustment of employee grievances.

Step 2:

Upon timely receiving a written grievance, the involved Contractor shall notify and schedule a meeting with the Business Manager of the involved Local Union, the Council, and the General Contractor, and their respective representatives, for the purpose of arriving at a satisfactory settlement. Such meeting shall be held within 7 calendar days of the involved Contractor's receipt of the written grievance. Meeting minutes shall be kept by the Contractor with copies to the parties within twenty-four (24) hours.

Step 3:

- (a) If the grievance shall have been submitted but not resolved in Step 2, any of the participating Step 2 entities may, within 21 calendar days after the initial Step 2 meeting, submit the grievance in writing (copies to other participants, including the General Contractor) along with copies of the minutes from Step 1 and Step 2, to (J.J. Pierson, Neal M. Eiseman and Thomas Hines) who shall act, alternately, as the Arbitrator under this procedure. The

Labor Arbitration Rules of the American Arbitration Association shall govern the conduct of the arbitration hearing, at which all Step 2 participants shall be parties. The decision of the Arbitrator shall be final and binding on the involved Contractor, Local Union, and employees, and the fees and expenses of such arbitrations shall be borne equally by the involved Contractor and Local Union.

- (b) Failure of the grieving party to adhere to the time limits set forth in this Article shall render the grievance null and void. These time limits may be extended only by written consent of the General Contractor, the involved Contractor, and the involved Local Union at the particular step where the extension is agreed upon. The Arbitrator shall have authority to make decisions only on the issues presented to him and shall not have the authority to change, add to, delete or modify any provision of this Agreement.

ARTICLE 10 - JURISDICTIONAL DISPUTES

SECTION 10.1 ASSIGNMENT

The assignment of work shall be solely the responsibility of the Contractor performing the work involved, subject to the pre-job conference and the procedures set forth in Section 8.3(C), and such work assignments shall be in accordance with the National Plan for the Settlement of Jurisdictional Disputes in the Construction Industry ("National Plan") or any successor Plan approved by the Building & Construction Trades Department, AFL-CIO.

SECTION 10.2 PROCEDURE FOR SETTLEMENT OF JURISDICTIONAL DISPUTES

All jurisdictional disputes involving Project Work shall be settled according to the National Plan, provided however, that disputes concerning intra-trade assignments (assignments between trades within the same International Union) will be determined by the applicable International Union.

SECTION 10.3 NO DISRUPTIONS

There will be no strikes, work stoppages, or slowdowns, arising out of any jurisdictional dispute. Pending the resolution of the dispute, the work shall continue uninterrupted and as assigned by the Contractor. No jurisdictional dispute shall excuse a violation of Article 7.

SECTION 10.4 AWARD

Any jurisdictional award pursuant to this Article shall be final and binding on the

disputing Unions and the involved Contractor on this Project only, and may be enforced in

any court of competent jurisdiction. Such award or resolution shall not establish a precedent on any other construction work not covered by this Agreement.

SECTION 10.5 LIMITATIONS

Awards made under this Article shall determine only to whom the disputed work belongs. The deciding person or group hereunder shall have no authority to (a) assign work to a double crew, that is, to more employees than the minimum required by the Contractor to perform the work involved; (b) assign the work to employees who are not qualified to perform the work involved; or (c) assign work being performed by non-union employees to union employees. This provision does not prohibit the establishment, with the agreement of the involved Contractor, of composite crews where more than one (1) employee is needed for the job.

ARTICLE 11 - WAGES AND BENEFITS

SECTION 11.1 CLASSIFICATION AND HOURLY RATE

All employees covered by this Agreement shall be classified in accordance with the work performed and paid the wage rates applicable for those classifications as required by the Schedule A applicable to the work. The term "straight time" in this Agreement shall mean the hourly wage rate applicable for those classifications as required by the applicable New York State Labor Law Section 220 ("Section 220") prevailing wage determination.

SECTION 11.2 EMPLOYEE BENEFITS

- A. Unless expressly provided differently in this Agreement, Contractors agree to pay employee benefits/supplements on behalf of all of their employees covered by this Agreement in the amounts required by the applicable Section 220 schedule in effect. Except as provided herein, the Contractors agree that such payments shall be made to those established jointly trustee employee benefit funds designated in Schedule A, and in the amounts so designated, to the extent such payments are required by and satisfy the Section 220 obligation. Bona fide jointly trustee fringe benefit plans established or negotiated through collective bargaining during the life of this Agreement may be added if they similarly fall within Section 220. Contractors not otherwise contractually bound to do so shall not be required to contribute to non-Section 220 benefits, trusts or plans; however, this provision does not relieve Contractors signatory to local collective bargaining agreements with any Local Union from complying with the benefit requirements for all funds contained in those collective bargaining agreements.

B. Notwithstanding Section 11.2(A):

- (1) Contractors who designate employees pursuant to Article 4, Section 4.2(B), may satisfy the above benefits obligation with respect to those employees by: (1) providing those employees with coverage under their private benefit plans for health, welfare, pension, annuity and 401(k); or (2) paying the full amount of such benefit to the employee in employees' wages. The total benefit payments to be made on behalf of each such employee must equal the total Section 220 benefit/supplement amount. If the Contractor's contribution into the private benefit plan for the above funds is less than the amount required by Section 220, the difference must be paid to the employee in cash. Payments of other benefits covered under Section 220 shall be paid to the respective Unions on behalf of employee**
 - (2) This same option shall apply with respect to any other employee who is referred to the Contractor through the hiring hall process provided such employee was previously employed by the Contractor and was a participant in a bona fide private benefit plan maintained by the Contractor which satisfies the requirements of Section 220.**
 - (3) The option for a private plan equivalent supplement shall not apply to contributions into Joint Apprentice Training Committee (JATC) or similar apprentice funds designated in Schedule A if the Contractor does not have an apprentice training program approved by the Department of Labor. Upon request by the Council, any contractor providing coverage under this provision will provide the Council with documentation of benefit payments made to individual employees during the term of their employment on the Project.**
 - (4) Contractors who exercise the option under Section 11.2(B) of this Article to pay into their own private benefit plans rather than the applicable jointly trusteed funds designated in Schedule A shall be responsible for and guarantee employee benefit/supplement payments and shall indemnify and hold harmless the jointly trusteed funds designated in Schedule A against any and all benefit/supplement claims by its employees.**
- C. Contractors who contribute to jointly trusteed funds under this Section agree to be bound by the written terms of the legally-established jointly trusteed Trust agreements specifying the detailed basis on which payments are to be paid into, and benefits paid out of, such trust funds but only with regard to work done on this Project and only for those employees for whom this Agreement requires such benefit Payments. Notwithstanding the foregoing, a Contractor's liability shall be at all times limited to the amount of contributions required to be made to the Trust Funds.**

D. Each Contractor shall be responsible for and guarantee the payment of all required fringe benefits on the Project. The Local Unions and/or the Council shall notify the General Contractor and the Construction Manager within 120 hours excluding weekends whenever a Contractor or Subcontractor, including the General Contractor, fails to make a required benefit payment and such delinquency remains outstanding after 30 days. Notification must be in writing and may be by email. If written notice of such a delinquency is received by the General Contractor within that 48-hour period, the General Contractor shall notify the Construction Manager immediately, but in any case, within 24 hours. If the Construction Manager receives notice of a delinquency by the General Contractor, it shall withhold from any funds due to the delinquent Contractor the amount of that delinquency, up to the total amount due, until any dispute regarding the delinquency has been resolved. The General Contractor shall have no other obligation with respect to contributions owed by any Contractor (or its Subcontractor); but the General Contractor shall continue to be obligated with respect to contributions based on work done by the General Contractor. If notice of a delinquency is not received by the Construction Manager within the required time periods, Owner shall have no basis upon which to withhold, with respect to that delinquency, any part of a payment which is otherwise due. Construction Manager shall require contractors to submit proof of benefit payment with pay request.

ARTICLE 12 - HOURS OF WORK, PREMIUM PAYMENTS, SHIFTS AND HOLIDAYS

SECTION 12.1 WORK WEEK AND WORK DAY

A. Unless otherwise provided for in this Agreement, the standard work week shall be five days, Monday through Friday, eight hours per day plus ½ hour unpaid lunch period each day. The starting time for the standard work week shall start at either 6:00 a.m., 6:30 a.m., 7:00 a.m., 7:30 a.m. or 8:00 a.m. Multiple starting times shall be allowed.

B. Four-tens: notwithstanding any other provision of the Agreement, when working a four-day work week, the work shall consist of 4 days, Monday through Thursday, ten hours per day plus ½ hour unpaid lunch period at the straight time rate. The starting time for four-tens shall be 6:00 a.m. 6:30 a.m. 7:00 a.m. A three-day minimal notice shall be required for four-tens to the respective involved unions.

C. On a 5-day work week, Saturday may be used as a make-up day at straight time to fulfill the 40-hour work week due to inclement weather. On a 4-day work week, Friday may be used as a make-up day at straight time to fulfill the 40-hour work week. Make-up days shall be scheduled for a minimum of 8 hours, except in the case of inclement weather in which Section 12.5 shall apply. Make-up days shall not be mandatory and no discipline shall be taken against employees electing not to work the make-up day. This shall also apply when more than one shift or multiple shifts are worked.

D. The changing of the regular starting time, except in the case of overtime and the switch from a 5-day and 4-day work weeks shall be a 4-week minimum.

SECTION 12.2 OVERTIME

Overtime pay for hours outside of the standard work week and work day, defined in Section 12.1, and all work on Saturdays shall be paid at time and one half the hourly rate and benefits will be paid on straight time. All work on Sundays shall be paid at two times the hourly rate and benefits will be paid at straight time.

SECTION 12.3 SHIFTS

- A. Flexible Schedules - Scheduling of shift work, including Saturday and Sunday work, shall be within the discretion of the Contractor in order to meet Project Work schedules and existing Project Work conditions. Shifts must have prior approval of the General Contractor and/or Owner and must be scheduled with not less than three work days' notice to the Local Union.
- B. Second and/or Third Shifts -- Saturday and/or Sunday Work.
The second shift shall start between 3 p.m. and 6 p.m. and the third shift shall start between 11 p.m. and 2 a.m. Shift differentials shall be straight time plus fifty percent (50%) of the Schedule A shift differential. No other premium or payments for such work shall be required unless such work is in excess of 40 hours during the week. There shall be no reduction in hours worked on a second and/or third shift, except that when 3 shifts are working together, the length of one or more shifts can be reduced to accommodate a 24-hour day and only actual hours worked will be paid. Work performed on Saturdays or Sundays shall be paid as provided in the applicable Schedule A.
- C. To clarify above: "Schedule A Shift Differential designated percentage rates vary according to each trade's prevailing Collective Bargaining Agreement. Shift work as part of this Project Labor Agreement is 50% of the designated percentage of the shift percentages of each trades, for example if a trades shift differential is 15% it would be 7.5%."

SECTION 12.4 HOLIDAYS

- A. Schedule - There shall be seven (7) recognized holidays:

New Year's Day
President's Day
Memorial Day
Fourth of July
Labor Day
Thanksgiving Day
Christmas Day

All said holidays shall be observed on the dates designated by New York State Law. In the absence of such designation, they shall be observed on the calendar date, except that holidays which occur on Sunday shall be observed on the following Monday.

- B. Payment - Regular holiday pay, if any, for work performed on a recognized holiday shall be in accordance with the applicable Schedule A. There will be no benefits paid on holidays unless worked.
- C. Exclusivity - No holidays other than those listed in Section 12.4 shall be recognized or observed.

SECTION 12.5 REPORTING PAY

- A. Employees who report to the work location pursuant to a regular schedule and who are not provided with work or whose work is terminated early by a Contractor, for whatever reason, shall receive two (2) hours reporting pay and actual hours worked thereafter
- B. When an employee who has completed his or her scheduled shift and has left the Project site is "called out" to perform special work of a casual, incidental, or irregular nature, the employee shall receive pay for actual hours worked at applicable straight time or overtime rates in accordance with this Agreement, but no less than a minimum guarantee of one (1) hour at the employee's straight time rate.
- C. When an employee leaves the job or work location of their own volition, is discharged for cause, or is not working as a result of the Contractor's invocation of Section 12.8 below, he or she shall be paid only for the actual time worked.
- D. There shall be no pay for time not actually worked except as specifically set forth in this Article 12 and where an applicable Schedule A applies to Forepersons, Stewards and Lead Engineer in reference to pay.

SECTION 12.6 PAYMENT OF WAGES

- A. Payday: Payment shall be made by check, drawn on a New York bank with branches located within commuting distance of the job site. Paychecks shall be issued by the Contractor at the job site by 3:00 p.m. on Thursdays. In the event that the following Friday is a bank holiday, paychecks shall be issued on Wednesday of that week. Not more than one week's wages shall be held back in any pay period. Paycheck stubs shall contain the name and business address of the Contractor, together with an itemization of deductions from gross wages.

- B. Termination: Employees who are laid off or discharged for cause shall be paid in full for that which is due them at the time of termination. The Contractor shall also provide the employee with a written statement setting forth the date of layoff or discharge.

SECTION 12.7 INJURY/DISABILITY

An employee who, after commencing work, suffers a work-related injury or disability while performing work duties, shall receive no less than eight (8) hours wages for that day. Further, the employee shall be rehired at such time as the employee is able to return to duties provided there is still work available on the Project for which the employee is qualified and able to perform.

SECTION 12.8 EMERGENCY WORK SUSPENSION

A Contractor may, if considered necessary for the protection of life, property, and/or safety of employees or others, suspend all or a portion of Project Work. In such instances, employees shall be paid for actual time worked; provided however, that when a Contractor requests that employees remain at the job site available for work, employees shall be paid for "stand-by" time at their hourly rate of pay.

ARTICLE 13 - APPRENTICESHIP & HELMETS TO HARDHATS

SECTION 13.1 APPRENTICE RATIOS

Recognizing the need to maintain continuing supportive programs designed to develop adequate numbers of competent workers in the construction industry and to provide craft entry opportunities for minorities, women and economically disadvantaged non-minority males, Contractors will employ apprentices in their respective crafts to perform such work as is within their capabilities and that is customarily performed by the craft in which they are indentured. Contractors may utilize apprentices and such other appropriate classifications as are contained in the applicable Schedule A in a ratio of not less than twenty-five percent (25%) of the work force by craft (without regard to whether a lesser ratio is set forth in Schedule A), unless the applicable Schedule A provides for a higher percentage. The first person assigned to the job shall be a Journeyman. The second person assigned may be an apprentice. Subsequent assignments shall be Journeymen until the applicable ratio is achieved. This assignment shall be repeated until staffing needs are satisfied. Apprentices and such other classifications as are appropriate will be employed in a manner consistent with the provisions of the applicable Schedule A.

SECTION 13.2 NYS DEPARTMENT OF LABOR- APPRENTICESHIP

To assist the Contractors in attaining a maximum effort on this Project, the Unions agree to work in close cooperation with, and accept monitoring by, the New York State Department of Labor to ensure that minorities and women are afforded every opportunity to participate in apprenticeship programs that result in the placement of apprentices on this Project. In addition, up to fifty percent (50%) of the apprentices placed on this Project may be first year, minority, women or economically disadvantaged apprentices. The Local Unions will cooperate with Contractor requests for minority, women, or economically disadvantaged referrals to meet this Contractor effort. These workers may be delivered under a "Direct Entry" designation or by use of a Department of Labor Waiver.

SECTION 13.3 HELMETS TO HARDHATS

The Contractors and the Unions desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Contractors and the Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (the "Center") and the Center's "Helmets to Hardhats" program as a resource for preliminary orientation and assessment of construction aptitude; referral to apprenticeship programs or hiring halls; counseling and mentoring; and support networks, employment opportunities, and other needs as identified by the parties.

The Unions and the Contractors agree to work with the Center to create and maintain an integrated database of veterans interested in working on the Project as well as information about apprenticeship and employment opportunities related to this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

SECTION 13.4 PARTICIPATION GOALS (MBE, WBE, SVDOB)

The Newburgh School District, contractors, the Hudson Valley Building and Construction Trades Council and its affiliated unions are committed to meeting the NYS Participation Goals and shall be in alignment with the current goal or standards set for by New York State for Minority Business Enterprises (MBE), Woman Owned Business Enterprise (WBE) and Service-Disabled Veteran Owned Business (SVDOB) to ensure participation on the project by MBE, WBE and SVDOB firms while maintaining fiscal responsibility.

Outreach by the construction managers, contractors, Hudson Valley Building and Construction Trades and affiliated unions and contractor associations to ensure participation goals of MBE, WBE and SVDOB firms are met will be required through the project.

ARTICLE 14 – NO DISCRIMINATION

SECTION 14.1 COOPERATIVE EFFORTS

The Contractors and Unions agree that they shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, marital status, age, union or non-union status, real or perceived sexual orientation or any other status protected by law, in any manner prohibited by law or regulation. It is recognized that special procedures may be established by Contractors and Local Unions and the New York State Department of Labor for the training and employment of persons who have not previously qualified to be employed on construction projects of the type covered by this Agreement. The parties to this Agreement shall assist in such programs and agree to use their best efforts to ensure that the goals for female and minority employment are met on this Project. Nothing in this section shall be grievable.

SECTION 14.2 LANGUAGE OF AGREEMENT

The use of the masculine or feminine gender in this Agreement shall be construed as including both genders.

ARTICLE 15- GENERAL TERMS

SECTION 15.1 PROJECT RULES

The Construction Manager, General Contractor and/or other Contractors may establish from time to time such reasonable Project rules as are necessary for the good order of the Project. These rules shall be outlined at the pre-job conference, detailed in the contract documents, posted at the Project site, and may be amended thereafter as necessary.

Security Protocols – The Construction Manager and/or NECSD, in their sole discretion, will determine security protocols for the entire Project Site. Strict compliance by all employees with security procedures, protocols, and directives issued by these entities or its delegated, is required by all employees at all times.

SECTION 15.2 TOOLS OF THE TRADE

The welding/cutting torch and chain fall are tools of the trade having jurisdiction over the work performed. Employees using these tools shall perform any of the work of the trade. There shall be no restrictions on the emergency use of any tools or equipment by any qualified employee or on the use of any tools or equipment for the performance of work within the employee's jurisdiction.

SECTION 15.3 SUPERVISION

Employees shall work under the supervision of the craft foreperson or general foreperson.

SECTION 15.4 FULL WORKDAY

Employees shall be at their work area at the starting time established by the Contractor. The signatories reaffirm their policy of a fair day's work for a fair day's wage.

SECTION 15.5 CAREER AND TECHNICAL EDUCATION ("CTE")

With the exception of work already excluded under this Agreement, the parties to this Agreement agree to meet for the purpose of determining which proprietary equipment in the Career and Technical Education ("CTE") Building will be included or excluded under the Project Labor Agreement. This equipment includes, but is not limited to, the equipment in the café, culinary room, auto, makers spaces, photo/art, nursing and EMS, cosmetology/barbershop, architecture/engineering and carpentry/machinery rooms. The parties shall meet upon finalization of plans & specifications for the "CTE" Building and in advance of advertisement of bids related to the "CTE" Building.

ARTICLE 16 - SAFETY PROTECTION OF PERSON AND PROPERTY

SECTION 16.1 SAFETY REQUIREMENTS

Each Contractor will ensure that applicable OSHA and New York State mandated safety requirements are at all times maintained on the Project and the employees and Unions agree to cooperate fully with these efforts. Employees must perform their work at all times in a safe manner and protect themselves and the property of the Contractor and NECSD from injury or harm. Failure to do so may be grounds for discipline, including discharge. Prevention of accidents at the site is the responsibility of the Contractors, its employees, subcontractors and suppliers, persons, and entities at the site. The Contractors shall establish their own safety programs implementing safety measures, policies, and standards conforming to those required or recommended by governmental and quasi-governmental authorities having jurisdiction. The Construction Manager is not responsible for identifying unsafe practices, nor for failure to stop the Contractors' unsafe practices; and, the Construction Manger's failure to stop the Contractors' unsafe practices shall not relieve the Contractors of the responsibility therefore.

SECTION 16.2 CONTRACTOR RULES

Employees covered by this Agreement shall at all times be bound by the reasonable safety, security, and visitor rules as established by the Owner. Such rules will be published in the contract documents and may be posted in conspicuous places throughout the Project.

SECTION 16.3 INSPECTIONS

The Contractors and NECSD's Architect and Construction Manager retain the right

to inspect incoming shipments of equipment, apparatus, machinery, and construction materials of every kind.

ARTICLE 17 – TEMPORARY SERVICES

Temporary light, power, cooling, ventilation and other services shall only be required on the specific request of the Contractor and when requested shall be assigned to the appropriate trade with jurisdiction. Temporary coverage may be provided by the Contractor's employees already working under this Agreement during regular work hours. The Contractor will determine the need for temporary coverage requirements during non-work hours. For safety reasons, temporary light and power panels will only be accessed by employees of the electrical contractor responsible for supplying the temporary light and power panels. This shall not require a standby employee who is not performing Project Work. There shall be no stacking of trades on temporary services. In the event temporary services are claimed by multiple trades, the matter shall be resolved pursuant to Article 10.

ARTICLE 18 - SAVINGS AND SEPARABILITY

SECTION 18.1 THIS AGREEMENT

In the event that the application of any provision of this Agreement is enjoined, on either an interlocutory or permanent basis, or is otherwise determined to be in violation of law, the provision involved (and/or its application to a particular part of the Project, as necessary) shall be rendered, temporarily or permanently, null and void, but the remainder of the Agreement shall remain in full force and effect to the extent allowed by law. In the event a court of competent jurisdiction finds any portion of the Agreement to be invalid, the parties will immediately enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the court determination and the intent of the parties hereto for contracts to be let in the future.

SECTION 18.2 NON-WAIVER

Nothing in this Agreement is intended to be or shall be construed as a waiver by any Union(s) of any prevailing wage determination or schedule that is applicable to their trade for any public work that has been or may be performed in the future on any work outside the scope of this Agreement. Nothing contained in this Agreement is intended to be or shall be construed as a waiver by any Union(s) of any more favorable term or condition of employment that may be contained in any collective bargaining agreement applicable to work outside the scope of this Agreement.

ARTICLE 19 - FUTURE CHANGES IN SCHEDULE A AREA CONTRACTS

SECTION 19.1 CHANGES TO AREA CONTRACTS

Each Schedule A attached to this Agreement shall continue in full force and effect until the Contractor and/or Union parties to the area collective bargaining agreements which are the basis for the Schedule A notify the Owner and General Contractor in writing of the agreed upon changes in those agreements which are applicable to the Project, and their effective dates. Such changes shall only be effective to the extent consistent with this Agreement. Any disagreement between signatories to this Agreement over the incorporation into Schedule A of provisions agreed upon in the renegotiation of area collective bargaining agreements shall be resolved in accordance with the procedure set forth in Article 9 of this Agreement.

SECTION 19.2 LABOR DISPUTES DURING AREA CONTRACT NEGOTIATIONS

The Unions agree that there shall be no strikes, work stoppages, sympathy actions, picketing, slowdowns or other disruptive activity or other violations of Article 7 affecting the Project by any Local Union involved in the renegotiation of area local collective bargaining agreements, nor shall there be any lock-out on this Project affecting a Local Union during the course of such renegotiations.

ARTICLE 20 - WORKERS' COMPENSATION ADR

At the written option of the Contractor and with the written approval of the Hudson Valley Building Trades Council, all Local Unions, Contractors and sub-contractors working on this Project agree to be bound by the Collectively Bargained Workers Compensation Alternative Dispute Resolution Agreement (ADR Agreement) and to the ADR program set forth therein, by and between the Construction Industry Council of Westchester and the Hudson Valley, Inc., and the Building and Construction Trades Council of Westchester and Putnam County, New York, entered into on January 26, 2007, as amended

ARTICLE 21-HUDSON VALLEY BUILDING AND CONSTRUCTION TRADES LABOR MANAGEMENT ALLIANCE

If not prohibited by law and there are no direct or additional costs to the Owner or Contractors, parties to this Agreement agree to participate in the Hudson Valley Building and Construction Trades Labor Management Alliance.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed and effective as of the 1st day of February 2021.

FOR THE HUDSON VALLEY BUILDING AND CONSTRUCTION TRADES COUNCIL:

By: L. Todd Diorio
L. Todd Diorio, President

FOR THE PALOMBO GROUP

BY: Luis H. Rodriguez
(Name/Title) Luis H. Rodriguez, President

FOR NEWBURGH ENLARGED CITY SCHOOL DISTRICT:

BY: Roger Ramous BOE APPROVED.
(Name/Title) ROGER RAMOUS / OWNERS REPRESENTATIVE

FOR THE LOCAL UNIONS:

INTERNATIONAL BROTHERHOOD OF BOILERMAKERS, IRON SHIP BUILDERS, BLACKSMITHS, FORGERS & HELPERS, DISTRICT NO. 5

BY: _____
(Name/Title)

E-mail _____

Office No. or Cell _____

THE INTERNATIONAL UNION OF BRICKLAYERS AND ALLIED CRAFTWORKERS LOCAL

BY: David A. Williams
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NORTH ATLANTIC STATES REGIONAL COUNCIL OF CARPENTERS LU# 279

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INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL

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INTERNATIONAL ASSOCIATION OF HEAT AND FROST INSULATORS AND ALLIED WORKERS LOCAL #91

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FOR THE LOCAL UNIONS:

INTERNATIONAL BROTHERHOOD OF BOILERMAKERS, IRON SHIP BUILDERS, BLACKSMITHS, FORGERS & HELPERS, DISTRICT NO. 5

BY: Arthur J. Kelly - BM/ST
(Name/Title)

boilermakers10015@verizon.net 516-326-2500
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INTERNATIONAL ASSOCIATION OF HEAT AND FROST INSULATORS AND ALLIED WORKERS LOCAL #91

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INTERNATIONAL UNION OF OPERATING ENGINEERS, LOCAL 825

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PLUMBERS, STEAMFITTERS AND SERVICE TECHNICIANS LOCAL UNION 373

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INTERNATIONAL ASSOCIATION OF SHEET METAL, AIR, RAIL AND
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ROAD SPRINKLER FITTERS LOCAL UNION 669

BY: _____
(Name/Title)
_____ Office No. or Cell
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TEAMSTERS UNION LOCAL 445

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INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS

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NEW YORK CITY DISTRICT COUNCIL OF CARPENTERS LOCAL 740 Millwright
2257 Floor Covers

BY: Michael J. McAvanagh Vice President
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INTERNATIONAL ASSOCIATION OF SHEET METAL, AIR, RAIL AND
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BY: _____
(Name/Title)

E-mail _____

Office No. or Cell _____

ROAD SPRINKLER FITTERS LOCAL UNION 669

BY: *Demetrius H. Killey* Business Agent
(Name/Title)

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Office No. or Cell

TEAMSTERS UNION LOCAL 445

BY: _____
(Name/Title)

E-mail _____

Office No. or Cell _____

INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS

BY: _____
(Name/Title)

E-mail _____

Office No. or Cell _____

NEW YORK CITY DISTRICT COUNCIL OF CARPENTERS LOCAL 740

BY: _____
(Name/Title)

E-mail _____

Office No. or Cell _____

BRICKLAYERS AND ALLIED CRAFTS, TILE, MARBLE & TERAZZO UNION OF NEW YORK AND NEW JERSEY, LOCAL NO. 7

BY: Robert J. BA.
(Name/Title)

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UNITED UNION OF ROOFERS, WATERPROOFERS AND ALLIED WORKERS LOCAL NO. 8

BY: Bill Wilmer B.A.
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SCHEDULE A – LOCAL COLLECTIVE BARGAINING AGREEMENTS

ARTICLES OF AGREEMENT between the INTERNATIONAL BROTHERHOOD OF BOILERMAKERS, IRON SHIP BUILDERS, BLACKSMITHS, FORGERS & HELPERS, AFL-CIO and THE FIRMS WHOSE SIGNATURES ARE AFFIXED HERETO January 1, 2018 -December 31,2020

AGREEMENT by and between THE CONSTRUCTION CONTRACTORS ASSOCIATION OF THE HUDSON VALLEY, BUILDING CONTRACTORS ASSOCIATION, AND THE MASON AND CONCRETE CONTRACTORS ASSOCIATION OF THE HUDSON VALLEY and THE INTERNATIONAL UNION OF BRICKLAYERS AND ALLIED CRAFTWORKERS LOCAL 1 NEW YORK June 1, 2017 - May 31, 2020

AGREEMENT between THE ASSOCIATIONS and the NORTH ATLANTIC STATE REGIONAL CONCIL OF CARPENTERS LOCAL UNION 279 May 1, 2019 -April 30, 2022

AGREEMENT by and between the HUDSON VALLEY CHAPTER, NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION and LOCAL UNION 363, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS April 1, 2018 - March 31, 2022

AGREEMENT by and between the NATIONAL ELEVATOR BARGAINING ASSOCIATION and the INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS July 9, 2017 -July 8, 2022

MEMORANDUM OF AGREEMENT by and between the WINDOW AND PLATE GLASS DEALERS ASSOCIATION and DISTRICT COUNCIL NO. 9 GLAXIERS LOCAL UNION #1087 May 1, 2017- April 30, 2023

AGREEMENT OF WORKING CONDITIONS between INDUSTRIAL INSULATION CONTRACTORS OF SOUTHERN NEW YORK and THE INTERNATIONAL ASSOCIATION OF HEAT AND FROST INSULATORS AND ALLIED WORKERS LOCAL #91 May 30, 2016 - May 26, 2019

AGREEMENT between FABRICATORS, ERECTORS AND REINFORCING CONTRACTORS ASSOCIATION OF THE HUDSON VALLEY, INC. and LOCAL UNION NO. 417 OF THE INTERNATIONAL ASSOCIATION OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING IRON WORKERS July 1, 2018-June 30, 2021

INDEPENDENT MILLWRIGHT AGREEMENT between NEW YORK CITY MILLWRIGHT CONTRACTORS ASSOCIATION and THE DISTRICT COUNCIL OF NEW YORK CITY AND VICINITY OF THE UNITED BROTHERHOOD OF CARPENTERS AND JOINERS OF AMERICA and MILLWRIGHT LOCAL 740 July 1, 2011 -June 30, 2017

AGREEMENT between MASTER PAINTERS and DISTRICT COUNCIL NO. 9 May 1, 2014 -April 30,2020

RESILIENT FLOOR COVERERS AGREEMENT between THE GREATER NEW YORK FLOOR COVERERS ASSOCIATION, INC. and THE DISTRICT COUNCIL OF NEW YORK AND VICINITY OF THE UNITED BROTHERHOOD OF CARPENTERS AND JOINERS OF AMERICA September 16, 2016 - June 30, 2024

AGREEMENT between UNITED UNION OF ROOFERS, WATERPROOFERS AND ALLIED WORKERS, LOCAL UNION NO. 8 and ROOFING & WATERPROOFING CONTRACTORS ASSOCIATION OF NEW YORK AND VICINITY July 1, 2019 -April 30, 2022

COMMERCIAL AGREEMENT between LOCAL UNION NO. 38 OF THE INTERNATIONAL ASSOCIATION OF SHEET METAL, AIR, RAIL AND TRANSPORTATION WORKERS (SMART) and SHEET METAL AND ROOFING CONTRACTORS' ASSOCIATION OF SOUTHEASTERN NEW YORK May 1, 2019-April 30, 2024

AGREEMENT between NATIONAL FIRE SPRINKLER ASSOCIATION, INC. and ROAD SPRINKLER FITTERS LOCAL UNION NO. 669 April 1, 2016-March 31, 2021

AGREEMENT HEAVY & HIGHWAY between TEAMSTERS UNION LOCAL 445, IBT, AFL-CIO and INDIVIDUAL EMPLOYERS May 1, 2017 -April 30, 2020

LOCAL UNION NO. 7 TILE, MARBLE, AND TERRAZZO, AFL-CIO OF NEW YORK AND NEW JERSEY AGREEMENT between the MARBLE INDUSTRY OF NEW YORK, INC. and THE MARBLE POLISHERS AND MAINTENANCE FINISHERS, LOCAL NO. 7 of the INTERNATIONAL UNION OF BRICKLAYERS AND ALLIED CRAFTSMEN July 1, 2018-June 30, 2022

AGREEMENT HEAVY & HIGHWAY between TEAMSTERS UNION LOCAL 445, IBT, AFL-CIO and INDIVIDUAL EMPLOYERS May 1, 2017 -April 30, 2020

AGREEMENT between THE GREATER NEW YORK AND NEW JERSEY TILE CONTRACTORS ASSOCIATION, INC. and THE TILE SETTERS AND TILE FINISHERS UNION OF NEW YORK AND NEW JERSEY, LOCAL UNION NO. 7 OF THE INTERNATIONAL UNIO OF BRICKLAYERS AND ALLIED CRAFTWORKERS June 2, 2017 -June 2, 2021

AGREEMENT between the MOSAIC, TERRAZZO AND CHEMICAL PRODUCT DECORATIVE FINISHER MASONS WORKERS ASSOCIATION LOCAL NO. 7 OF NEW YORK NEW JERSEY & VICINITY INTERNATIONAL UNION OF BRICKLAYERS AND ALLIED CRAFTWORKERS and MARBLE TERRAZZO AND SPECIALTY CONTRACTORS ASSOCIATION, INC. July 1, 2017-June 30, 2022

BUILDING AGREEMENT between LABORERS' LOCAL UNION NO. 17 and CONSTRUCTION CONTRACTORS ASSOCIATION of the HUDSON VALLEY, INC. June 1, 2017 - May 31, 2020

HEAVY HIGHWAY & SITE AGREEMENT between LABORERS' LOCAL UNION NO. 17, AGC OF AMERICA and CONSTRUCTION INDUSTRY COUNCIL May 1, 2017 - April 30, 2020

MECHANICAL CONTRACTORS ASSOCIATION OF ROCKLAND, ORANGE, SULLIVAN COUNTIES and PLUMBERS & STEAMFITTERS LOCAL NO. 373 May 2019 - April 2021

AGREEMENT between INTERNATIONAL UNION OF NORTH AMERICA OPERATING ENGINEERS LOCAL UNION NO. 825 INDEPENDENT AGREEMENT July 1, 2019

**SCHEDULE A COLLECTIVE BARGAINING AGREEMENT can be viewed by visiting the Hudson Valley Building and Construction Trades Council website: bulldituniori.org
Username: hudsonvalley
Password: buildinggrades**

IT SHALL BE THE REPSONSIBILITY OF THE CONTRACTOR TO VERIFY SCHEDULE A AGREEMENTS WITH THE RESPECTIVE UNIONS SIGNATORY TO THIS PROJECT LABOR AGREEMENT.

For questions about this Agreement or Schedule A contact:

**Todd Diorio (845) 565-2737 or email tdiorio555@aol.com
President, HVBCTC**

SCHEDULE B - LETTER OF ASSENT

The undersigned party confirms that it agrees to be a party to and be bound to the _____ Project Labor Agreement (hereinafter "Agreement" or "PLA") entered into between "COUNCIL" and "NECSD", understands that such Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms. The terms of the Agreement and its Schedules are hereby incorporated by reference herein.

The undersigned, as a Contractor or Subcontractor (hereinafter "Contractor") on the Project known as the Capital Construction Bond Projects and located within the "NECSD" (hereinafter "Project"), for and in consideration of the award to it of a contract to perform work on said Project, and in further consideration of the mutual promises made in the PLA, a copy of which was received and is acknowledged, hereby:

- (1) Accepts and agrees to be bound by the terms and conditions of the Project Labor Agreement, together with any and all schedules, amendments, and supplements now existing or which are later made thereto;
- (2) Agrees to be bound by, and incorporates and adopts the legally established collective bargaining agreements (Schedule "A") and local trust agreements as referenced in the Project Labor Agreement and this letter of Assent for this Project;
- (3) Authorizes the parties to such local trust agreements to appoint trustees and successor trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor;
- (4) Certifies that it has no commitments or agreements that would preclude its full and complete compliance with the terms and conditions of said Project Labor Agreement. The Contractor agrees to employ labor that can work in harmony with all other labor on the Project and shall require labor harmony from every lower tier subcontractor it engages to work on the Project. Labor harmony disputes/issues shall be subject to the Labor Management Committee's Pre-Job conference provisions;

(5) Agrees to secure from any Contractor(s) (as defined in said Project Labor Agreement) which is or becomes a Subcontractor (of any tier) on the Project, a duly executed Agreement to be bound in from identical to this document;

(6) Agrees that it will not invoke the Most Favored Nations Clause that may be contained in any of its Collective Bargaining Agreements with affiliated unions as a result of the application of this Project Labor Agreement to this Project.

Dated: _____
Name of CM, Contractor

By: Authorized Officer & Title _____ Date: _____

Address

Phone

e-mail

Employer EIN _____ Employer NYS IU _____ WC# _____

Sworn to before me this
_____ day of _____, 20____

Notary Public

SCHEDULE C – ADMINISTRATION OF AGREEMENT; DESIGNEE

Name of Project: _____

The Owner shall name a Designee to administer this Agreement. The Designee shall be notified in the event any jurisdictional issue, grievance, or other matter concerning this PLA arises, and such Designee shall actively take part in the resolution of the issue. Any signatory Union may request the Designee's assistance in rectifying an issue.

The Designee's contact information is as follows:

_____ (Office Phone)

_____ (Cell Phone)

_____ (Email)

_____ (Signature)

_____ (Print)

Owner

SCHEDULE D – NATIONAL PLAN

A copy of National Plan for the Settlement of Jurisdictional Disputes can be viewed by visiting the Hudson Valley Building and Construction Trades website: builditunion.org

Username: hudsonvalley

Password: buildingtrades

DOCUMENT 007343 – PREVALING RATE OF WAGES

PART 1 – GENERAL

- A. The labor on this contract shall be performed in all respects in full accordance with the Labor Law of the State of New York. In accordance with Section 220, Subdivision 3, and Section 220-D, of the Labor Law, the Industrial Commissioner has designated as the minimum hourly wages to be paid to employees on the work the rates shown on the attached schedules which shall be posted in a prominent and convenient place for the inspection of the Contractor's employees. Article 8, Section 220 of the Labor Law, as amended by Chapter 750 of the Laws of 1956, provides, among other things, that it shall be the duty of the fiscal officer to make a determination of the schedule of wages and supplementals to be paid to all laborers, workmen and mechanics employed on public works projects. The amount of supplementals listed on the enclosed schedule does not necessarily include all types of prevailing supplementals.
- B. The Contractor shall make provision for disability benefits, workman's compensation, unemployment insurance and social security, as required by law.
- C. Per the New York State Education Department's directive via the Office of Facilities Planning, the Contractor is responsible for obtaining copies of the prevailing wage schedule and all updates thereto, as well as the list of employers ineligible to bid on or be awarded public work contracts, directly from the Department of Labor's Bureau of Public Work's web site:
 1. <http://www.labor.ny.gov/workerprotection/publicwork/PWContents.shtml>
 - a. Scroll down to Prevailing Wage Schedule.
 - b. Select the third link, "View of Previously Requested Prevailing Wage Schedule using PRC#"
 - c. Enter the PRC number: **2024000739**
 - d. Select Submit.
 - e. Select the first link "Wage Schedule" at the top right.
 2. In the event that the Contractor does not have internet access or is unable to access the Department's website, please fax a written request for a printed copy of the schedule to the Central Office of the Bureau of Public Works at (518) 485-1870.

END OF DOCUMENT 007343

SECTION 011200 – MULTIPLE PRIMES SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including the General and Supplemental Conditions and Division 1 Specification Section, apply to this Section.

1.2 SUMMARY

- A. Section includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Construction schedule.
 - 4. Requirements and assignments for each Contract.
 - 5. Owner-furnished products.
 - 6. Access to Prime Contracts.
 - 7. Coordination with occupants.
 - 8. Work restrictions.
- B. Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.
- C. Each Contractor is responsible for reviewing all Drawings and Specifications for every contract to gain a complete understanding and knowledge of the entire Project, to determine how the work of each contract is to interface with every other contract.
- D. Prime Contractors shall provide (1) Full Time experienced Construction Project Manager and (1) Full Time Superintendent, each with a minimum of 10 years of relevant Construction experience. Is a full-time project manager appropriate for the fire sprinkler contract?
- E. Prime Contractors shall provide resumes of the proposed Full Time Project Manager and Full Time Superintendent for CM, Architect and Owner approval.

DEFINITIONS

- A. Project Identification: Project consists of all labor, materials, equipment, appliances, services, and incidentals necessary for layout, installing, and performing New Construction at the Newburgh Enlarged City School District as shown on the Contract Drawings and described in the Specifications.

- B. Contract work to start in June 2024.

- B. C. The work will be constructed under multiple prime contracts. The GC is responsible for communicating, coordinating, and scheduling work with all awarded listed contracts below. One set of contract documents is issued covering multiple contracts. Each Prime Contract is defined as:
 - 1. CONTRACT 1 GC – GENERAL CONSTRUCTION/ SITE WORK
 - 2. CONTRACT 2 MC – MECHANICAL
 - 3. CONTRACT 3 PC - PLUMBING CONSTRUCTION WORK
 - 4. CONTRACT 4 EC – ELECTRICAL CONSTRUCTION WORK
 - 5. CONTRACT 5 FP – FIRE PROTECTION CONSTRUCTION WORK

- D. This section includes a summary of work for the multiple primes, including responsibilities for coordination and temporary facilities and controls.
 - 1. Project includes the construction of a new building.
 - 2. A 5-day work week is required on this project with hours from 7am-3:30pm or per the PLA agreement. Nights and weekends will be mandated if the contractor(s) are behind schedule and need additional time to bring the project back on schedule and or directed by the Construction Manager.

- E. Architect Identification: The Contract Documents were prepared for the Project by CSArch.
- F. Construction Manager: Jacobs Project Management has been engaged as Construction Manager for this Project to serve as an advisor to Owner and to aid in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.
- G. Building Code in Effect for Project: 2020 NYS Building Code and Local Fire Marshall requirements.
- H. Comply with the following: New York State building Code and the building standards of the New York State Education Department.

1.3 THE CONTRACT

- A. The Project will be constructed under a multiple prime contracting arrangement with the Owner awarding and holding separate Contracts. Each contractor shall furnish all labor, material, tools, equipment, supervision, layout, delivery, trucking, shop drawings, submittals, etc. necessary to complete the work described in the Divisions of Work of their respective divisions (Including where coordination between primes occurs) Contracts and based upon a complete set of Contract Documents.
- B. Each Contractor has been given the opportunity prior to bidding to inspect the entire Project for references to their Contract work and agrees to accept as it exists on the date of the bid opening.
 - 1. Keep driveways and site entrances serving the project clear and available to critical deliveries, placement of concrete, emergency vehicles, etc. for the duration of construction. Do not obstruct access to, or use these areas for parking, staging of equipment or materials. All deliveries are to be scheduled and any material stored onsite must be communicated with the CM and Stored in the designated staging area per the site logistics plan. The school grounds can't support over storage of material. Offsite storage will be needed if material is procured in advance of its installation date.
 - 2. Each contractor will provide sign in sheets of their respective manpower to the CM Daily.
 - 3. Each contractor will be responsible to provide weekly toolbox talks, Job Hazardous Analysis (JHA's), and 2 week lookaheads.
- C. Each Prime Contractor shall:
 - 1. Provide field-engineering services, in addition to those provided by the General Work Prime Contract, to install utilities included in the applicable Prime Contract.
 - 2. Coordinate to create a construction schedule information to formulate one master schedule for the entire Project by the GC.
 - 3. Provide reflective vests and all required OSHA-approved PPE to always be worn by all on-site personnel. Parties that do not abide by this requirement will be escorted off the premises.
 - 4. Provide potable drinking water for its own employees.
 - 5. Each Prime Contractor is responsible for Furnishing access panels and turning them over to the General Contract for installation. Access is required to be provided for all concealed systems for system maintenance and repair for items installed in their Prime Contract. This specifically talks to access panels needed for future maintenance by the district.

6. Provide and maintain material lifting equipment required for the completion of their Contract requirements, and complying with NYS Labor Laws, OSHA Regulations, and other Federal, State, and local laws.
7. Provide and maintain additional temporary stairs, ladders, ramps, scaffolding, and platforms required specifically for completion of work of their own Contract, and as further detailed in this section. All work needs to comply with the NYS Labor Laws, OSHA regulation, and other Federal, State, and local laws.
8. Provide Fire Prevention materials and equipment for fire protection related to the work of their own Prime Contract. Provide fire extinguishers, fire blankets, and fire watch during all cutting and welding operations.
9. Provide any supplemental lighting required to install the work of its own Contract, beyond the minimum OSHA levels provided under the Electrical Work Prime Contract.
10. Provide any supplemental heat required to install the work of its own Contract when temp heat is needed outside the timeline of interior finishing work. Examples included but are not limited to tenting and heating for exterior masonry work, blanketing of concrete, localized heating in and area not fully enclosed.
11. Provide traffic control for deliveries, and equipment needed to perform the work of their own Prime Contract.
12. Provide protection of its own finished Work, after installation, until accepted by the Owner.
13. Provide fire caulking for any penetration related to the work for its own Prime Contract.
14. Provide any office and storage trailers required to complete the work of their own Prime Contract. Storage containers must be within the staging area and approved by the district.
15. Each Prime Contractor and their Subcontractors shall provide a list of potential and all employees that will require access to the CTE site. This list of employees will be checked through the NECSD Raptor System. Failure to provide this list of employees to the Construction Manager within a min. of 48 hrs. in advance prior to site visit will result in the Prime Contractor or their subcontractors delay of access to the Project Site. Confirmation of acceptance must be provided by the district and sent to the Contractor before work can start.

1.4 SUMMARY OF WORK

A.

A. CTE Project - The work consists of but is not limited to the following:

1. GENERAL / SITE CONTRACTOR - New Building Construction, including food service equipment. All site grading, flat work, paving's, plantings. Refer to contract specific section for more information.
2. MECHANICAL CONTRACTOR - New Building Construction, New mechanical throughout the building, specialty equipment including but not limited to welding booths, all roof top curbs and supports, Refer to contract specific section for more information.
3. ELECTRICAL CONTRACTOR - New Building Construction. Main service and Mechanical connections, Fire alarm, low voltage controls. Refer to contract specific section for more information.
4. PLUMBING CONTRACTOR – New Building Construction. Inclusive of gas and plumbing services. Refer to contract specific section for more information.
5. FIRE SUPPRESSION – New Building Construction, Tamper and Flow Switches, FDC Connection, Fire Sprinkler Assembly in Plumbing Equipment Room Refer to contract specific section for more information.
- 6.

1.5 WORK UNDER SEPARATE CONTRACTS

- A. The project will be constructed under a multiple-prime contracting arrangement.
- B. One set of documents is issued covering all prime contracts scope of work. Each prime contractor is to review ALL drawings and specifications for complete understanding and knowledge of the work to be performed by all trades. Any questions of responsibility should be discovered Pre award. After award, the CM has the right to dictate responsibility.
- C. The following Contract Documents are specifically included and defined as integral to each Prime Contract.
 1. Bidding Requirements
 2. Performance and Payment Bonds (with acknowledgement of any and all Riders)
 3. Conditions of the Contract, including
 - a. General Conditions & Supplementary Conditions
 - b. Insurance Requirements
 - c. NYS Prevailing Wage Rates
 - d. Project Labor Agreement
 - 4.

- D. Extent of Contract: Unless the Contract Documents contain a more specific description of the work, names, and terminology on Drawings and in Specification Sections determine which contract includes a specific element of Project.
1. Unless otherwise indicated, the Work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.
 2. All Concrete Work is the responsibility of the GC, unless specifically assigned to another Contract. Provide all cutting, core drilling & patching associated with the Work of its own Prime Contract. All patching is to be performed by mechanics qualified and experienced with the materials and finishes being patched and hired by the responsible Prime Contractor under the PLA. Openings requiring structural reinforcing including lintels for all trades will be the responsibility of the General construction contract. Coordinate with Drawings and lintel schedule for opening size requirements.
 3. Each Prime Contractor shall designate a full-time superintendent to supervise the work of the Prime Contractor, who shall always be present on the job site when work is being performed; this person shall be familiar with Project and authorized to conclude matters relating to progress. This person shall also represent their company at weekly contractor meetings.
 4. Termination and removal of its temporary facilities shall be provided by each contract for its own Work.
 5. The Electrical Contractor shall provide temporary power and lighting at the area of work for all trades and shall coordinate with the utility company for service connections.
 6. Temp Heat for New Building will be provided by the General Contractor when a portion of building become fully or partially enclosed or as directed by the Construction Manager. The General contractor is responsible for engaging a vendor to determine how many heaters will be required to sufficiently heat the building. GC to provide fuel and operator to ensure uninterrupted power. Temp heaters to be furnished with all accessories necessary to distribute heat through the building. The GC is responsible for installing and executing this work. Electrical contractor to provide temp power to temp mechanical equipment. Site logistics plan to be updated to reflect temp heater locations and what is being used for temp heaters which will need to be in accordance with the requirements of the local AHJ and Fire Marshal.
- E. **Temporary Facilities and Controls:** In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Division 1 Section 01 5000 "Temporary Facilities and Controls," each Contract is responsible for the following:

1. Installation, operation, maintenance, and removal of each temporary facility are usually considered as its own normal construction activity, and costs and use charges associated with each facility.
2. Generators, plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
3. Each Prime Contractor is to stockpile his debris on a daily basis and place it in the dumpster. Dumpsters will be provided by the General Construction contract for use by the Prime contractors, recycling of materials will be instituted daily.
4. Secure lockup of its own tools, materials, and equipment.
5. Safety procedures as dictated by the district, OSHA, and the NYS Department of Labor.
6. Labor for daily clean-up.
7. General Contractor is responsible for maintaining and fixing the existing temp fence. Any additional temp fencing used on site must be POST DRIVEN. GC to review site logistics plan for more information on added fencing. Information shown on site logistics plan shows approximate location, it is the GC's responsibility to completely enclose the construction area and modify construction fencing necessary to execute their work and maintain a secured site. Additional temp Fencing maybe needed to Corden off areas of work and it will be the responsibility of the General Contractor to coordinate this with the CM and figure this cost into the cost of work. All gates to have chains and locks that are keyed alike -
8. EC is responsible to provide temp. power for the duration of the project for the work happening onsite including but not limited to the building, temp trailer and Conex boxes. EC to coordinate with CM to re-establish existing temp utility power onsite. Additionally, the EC is responsible for establishing a new temp service local to the temp trailers and coordinating with the utility company for this work. The GC is responsible for trenching and backfilling for temp service and EC is responsible for all electrical work including conduit, wiring and connections. Refer to logistic plan for diagrammatic location.
9. PC to provide temp water as required. Including temp hose bibs. Include heat tracing if exposed to the elements. EC to connect if required.
10. GC to obtain hydrant permit from the City of Newburgh including backflow preventor.

G.

1.6 CONTRACT 1 - GENERAL / SITE CONSTRUCTION

A. The Work of the General Construction Work Contract includes but is not limited to, the following descriptions:

1. Includes new building construction. This includes, but is not limited to, *work shown* on the following:
2. Drawings:
 - 1) All "G" Title sheets, general notes Drawings" (General)
 - 2) All "LS" Drawings (Life Safety)
 - 3) All "C" Drawings (Civil)
 - 4) All "S" Drawings (Structural)
 - 5) All "A" Drawings (Architectural)
 - 6) All "AF" Drawings (Architectural Finish)
 - 7) All "FE" Drawings (Furniture & Equipment) For Coordination
 - 8) All "FS" Drawings (Food Service)
 - 9) All "FP" Drawings (Fire Protection) For Coordination
 - 10) All "DJ" (piping and instrumentation diagram) For Coordination
 - 11) All "P" Drawings (Plumbing) For Coordination
 - 12) All "M" Drawings (Mechanical) For Coordination
 - 13) All "E" Drawings (Electrical) For Coordination
 - 14) All "FA" Drawings (Fire Alarm) For Coordination
 - 15) All "T" Drawings (Technology) For Coordination
 - 16) All "TL & TS" Drawings (Audio Visual) For Coordination
 - 17) All "TR" Drawings (Audio Visual)
 - 18) Site Logistics Plan (all work shown new construction work)
3. Coordination:
 - 1) Coordinate with the work of all the other previous award contractors.
 - 2) The GC is required to lead, compile, and provide a detailed Master Schedule for all areas of work which includes all schedules provided by all other previously awarded Prime Contractors.
 - 3) Project Areas (see phasing plan)
 - 4) The GC is required to lead, compile, and provide the following (but not limited to) coordinated shop drawings between all previously awarded contracts:
 - b) Benchmarks & site survey
 - c) Foundation, rebar, penetrations/sleeves
 - d) Steel framing
 - e) Slab opening, Slab trenching
 - f) RCPs

4. Coordination With other Contractors:

- 1) Each trade will participate in producing coordination drawings. The General Contractor shall lead the coordination by means of producing a Master Construction Schedule for each Area of Work. The General Contractor shall coordinate with each Prime Contractor, their own work with each Prime Contractor by means of BIM and 2D Overlay shop drawings. The efforts of all Prime Contractors to coordinate locations, heights, routes, etc. to eliminate clashes between trades and/or obstructions. Coordination Period will consist of each trade meeting once a week to coordinate their drawings. Once the Coordination Period is complete with all Prime Contractors, they will be required to sign off on the Coordination Set.
- 2) The General Contractor to provide a complete coordinated schedule including all trades, tasks, and durations for each Area as shown in the Contract Documents. GC shall update the Master Project Schedule, as needed, during the life of the Project.
- 3) GC shall Provide a Recovery Schedule if required and directed by the CM.
- 4) GC to provide roof rails for rooftop condensing units and food freezers down to structural decking prior to roofing. GC is responsible for the food service equipment in its entirety including but not limited to associated condensing unit and attaching to rails.

5. Temporary Facilities: In Addition to

- 1) Provide dust protection as directed by the CM. GC shall maintain existing fencing surrounding the site.
- 2) GC to Provide wash out areas for construction vehicles as outlined in the Civil Drawings.
- 3) Provide erosion and Sediment Control and dewatering as it relates to any excavation associated with the GC Prime Contract
- 4) GC to Provide Portable toilets for all trades per OSHA requirements as well as a cleaning service to clean the Portable Toilets weekly.
- 5) Cleaning service to clean the CM trailer once a week.
- 6) Provide snow removal for contractor staging and all work areas.
- 7) During cold weather GC to submit cold weather procedures.
- 8) During cold weather GC to provide temp heat and blanketing for concrete curing.

- 9) GC is responsible for Dewatering of the construction site.
- 10) Provide Trackpad (Construction Entrances) maintenance.
- 11) GC is responsible for Existing Utilities Mark outs.
- 12) Provide and install Project information signs at the Site as directed by the CM. GC to provide a 4'-0" h x 8'-0" w metal sign with printed color rendering with project name and address. Signage to be mounted to existing support system. Project Signs provided and installed by GC and final designed by Architect.
- 13) Provide Temporary Facilities indicated as Work of this Contract in Division 1 Section 01 5000, "Temporary Facilities and Controls".
- 14) GC to provide temp heat as outlined in this specification sub paragraph 1.5 item D.7.
- 15) The General Contractor is responsible for OSHA required protection and safety, this includes but is not limited to:
 - 16) a. leading edge guardrails
 - 17) b. floor opening protection
 - 18) c. elevator shaft protection
 - 19) d. controlled access zones
 - 20) e. OSHA compliant scaffolding, hanging scaffold, hydro mobile, baker scaffold
 - 21) f. stair guard rails
 - 22) g. fire extinguishers
 - 23) h. flagmen
 - 24) g. Temp signage

6. New Construction:

- 1) The General Construction Work Contract shall perform all necessary cutting, trenching, excavation, backfilling, compaction, and field required poured in place concrete for all other primes. Coordinate A drawings with M, E, P, and FP drawings for recessed items, access panel locations, slab openings, roof openings, embeds, supplemental support, etc. for other trades and performed under this contract.
- 2) Provide multiple shifts work as needed to complete work as shown on milestone schedule. Multiple shifts during the week and single shift on Saturdays will be required to make up days on the schedule, unless contractor requests the additional time for other reasons that are acceptable by the district.

- 3) General Contractor to include all Theatrical Rigging, support and curtain systems as outlined in the "TS" & "TR" drawings. GC to coordinate this work with EC.
- 4) Provide surveyor to layout new building, submit to architect for approval.
- 5) General contractor to include all roofing scope in this contract including associated accessories like down spouts, crickets, and MEP openings, setting and roofing in MEP curbs, provide all curbs and rooftop equipment associated with Food Service package, and provide roof rails for the MC to install mechanical equipment condensing units/supports on. Curbs are provided by MC.
- 6) General contractor to supply and install all casework as shown on the contract drawings. Field measuring and shop drawings for architect approval will be the responsibility of this trade.
- 7) GC to include all winter concrete and masonry measures and expenses in this contract.
- 8) GC is responsible for all site and landscaping work.
- 9) GC to provide final cleaning of the entire school building by a professional cleaning company pre accepted by the district, building, and equipment provided under their other Contract immediately before the final inspection. Cleaning must be accepted by the district and done to their standards. Each Prime Contractor is responsible for cleaning and dust and debris generated from the work of their own Contract. Maintain areas in a cleaned condition until the Owner occupies the space. All new floors get clean, and final finished by the GC prior to turnover per the manufacturer's maintenance and care instructions.
- 10) GC is responsible for providing all steel lintels related to any other Prime Contracts work.
- 11) GC is responsible for providing all supplemental steel related to any other Prime Contracts work.
- 12) GC is responsible for all Roofing including the entire roofing system.
- 13) All blocking is provided by the GC including by not limited to roof, interior walls, coping and flashing, shelving and cabinet support, interior accessory support.
- 14) GC is responsible for providing all equipment outlined in the "A" Drawing equipment schedules that indicates contractor.

- B. The Work of the General Construction Contract includes but is not limited to, the following descriptions.
- a) This trade is responsible for always maintaining a secure Site, including but not limited to locking all gates at the end of each day.
 - b) Provide all temporary fall protection, guardrails, handrails, temporary stairs and ramps as required. Include maintaining these items throughout the project as well as removal when no longer needed.
 - c) Provide and maintain all site signage as requested by the CM. Example; Gate A-B, Hard hat area, No Smoking, Construction personnel only, Exit signs, Project information sign, etc...
 - d) General Construction Contractor shall obtain and pay for any permits, inspections, or certifications from governing authorities having jurisdiction over the work to be performed, or over the finished product to be installed by this Contractor. Project Building Permit is by others. Include in this contract hydrant use permits.
 - e)
 - 1) Provide roof penetrations and blocking for mechanical equipment curbs furnished by MC contractor. Roof drain piping are to be furnished and installed by the PC contractor. Roof openings by the GC. Each trade shall mark out each opening for the GC to cut.
 - f) Provide (unless noted otherwise):
 - 1) interior/exterior equipment and housekeeping pads for all Prime Contracts, coordinate as necessary for size and locations.
 - 2) Include in base bid furnishing all access doors related to GC work and installing all access doors including ones furnished by the other prime contractors for their work as determined through project coordination approved shop drawings. GC to provide fire-rated and non fire rated access doors/panels for their work.
 - g) All Primes are responsible to furnish access doors rated and non rated to the GC for installation. Primes must mark out location for the GC prior to closing up.
 - h) All concrete, rebar and forms provided by the General Contractor including sidewalks.
 - i) Provide all Structural steel as per the "S" drawings and or for MEP trades where structural support for their openings are required.
 - j) All excavation for underground Utilities and MEPS will be by the General Contractor. Coordinate with M,P and E drawings for locations.

- k) Provide all roof screening for HVAC equipment as indicated on the contract documents.
- l) Provide "attic stock" per project specifications.
- m) Provide all exterior caulking, control joints, and expansion joints.

1.7 Site Work of this Contract includes, but is not limited to, the following descriptions:

- A. GC contractor to excavate for all trades.
- B. GC contractor includes all storm and wastewater work.
- C. GC contractor to include all topsoil and seeding.
- D. GC contractor to include all paving/curbs/sidewalks and associated work including line striping.
- E. GC contractor to include all landscaping/plantings/trees.
- F. GC contractor to include demolition and removals as shown on the "C" drawings.
- G. This trade is required to maintain a clean, dust and debris free roadway outside of the site perimeters. GC to include cleaning of street daily and as required by the SWPPP. At the request of the Owner and CM this cleaning maybe required more than once a day depending on the level of activity onsite and on the adjacent roads.
 - 1. Any activity related to creating airborne dust outside, shall be mitigated with the use of water spray.
- H. Build and maintain stone tracking pads at each entrance and exit to the site if applicable.
- I. Provide temporary driveway, parking lot paving and drainage if required.
- J. Areas modified for construction/staging to be placed back to its natural state once construction is complete. Regrading and seeding as required.
- K. GC contractor is responsible for work within the limits of existing lots and building as shown on all "C" drawings. Include all silt fence and erosion control measures required for this work and requirements of SWPPP. Contractor is responsible for any corrective measures of erosion control and maintenance of the SWPPP.
- L. The Work of the General Construction Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:
 - 1. Division 00 – Procurement and Contracting Requirement, all Sections.

2. Division 1 – General Requirements, all Sections, including Temporary Facilities indicated.
3. Division 2 – Existing Conditions
4. Division 3 – Concrete, all Sections.
5. Division 4 – Masonry, all Sections.
6. Division 5 – Metals, all Sections.
7. Division 6 – Woods, Plastics and Composites, all Sections.
8. Division 7 – Thermal and Moisture Protection, all Sections
9. Division 8 – Openings, all Sections
10. Division 9 – Finishes, all Sections.
11. Division 10 – Specialties, all Sections
12. Division 11 – Equipment, all Sections, all Sections
13. Division 12 – Furnishings, all Sections
14. Division 14 – Conveying equipment
15. Division 19 – Audio Visual – Section 193000 – Studio Rigging & Curtains there sections for coordination.
16. Division 31 – Sitework, all Sections
17. Division 32 – Exterior Improvements, all sections
18. Division 33 – Utilities, all sections
- 19.

1.8 CONTRACT 2 - MECHANICAL CONTRACT

- A. Work of this Contract includes, but is not limited to, the following descriptions:
1. BIM Coordination, layout, sleeves, coordination of work with other Primes, new mechanical units, piping, ductwork, connections, and startup, RTU's, rigging for equipment, Testing and balancing, building commissioning, IAQ, etc...
 2. Contractor shall coordinate all Cx with district-provided Commissioning team.
 3. Also Includes work shown on the following drawings but not limited to these drawing for the new building construction:
 4. Drawings:
 - 1) All "G" Title sheets, general notes Drawings" (General)
 - 2) All "LS" Drawings (Life Safety) For coordination
 - 3) All "C" Drawings (Civil) For coordination
 - 4) All "S" Drawings (Structural) For coordination
 - 5) All "A" Drawings (Architectural)
 - 6) All "FE" Drawings (Furniture & Equipment)

- 7) All "FS" Drawings (Food Service) For coordination
- 8) All "DJ" (piping and instrumentation diagram)
- 9) All "FP" Drawings (Fire Protection) For coordination
- 10) All "P" Drawings (Plumbing) For coordination
- 11) All "M" Drawings (Mechanical)
- 12) All "E" Drawings (Electrical) For Coordination
- 13) All "FA" Drawings (Fire Alarm) For Coordination
- 14) All "T" Drawings (Technology) For Coordination
- 15) All "TL,TR & TS" Drawings (Audio Visual) For Coordination
- 16) Site Logistics Plan (all work shown new construction work)

B. **Work of this Contract includes**, but is not limited to, the following descriptions:

1. The Mechanical contractor is responsible to provide all equipment specified on Drawing M902 Schedules and associated accessories, Piping and Ductwork to for a complete system. Any rooftop curbs or support required for this equipment shown on Drawing M902 is the responsibility of the MC. MC is to deliver, and hoist all equipment, support and curbs up to the roof as well as coordinate this work with the GC. The MC to coordinate penetration and roofing work with the GC.
 - a.) The controls will be provided by owner under separate controls contract except for controls noted in paragraph b below which are complete systems by the MC. The controls contractor is responsible for furnishing the following instrumentation devices; control valves, stand-alone control dampers (shown and tagged on floor plans), thermowells, pressure probes, flow switches, insertion flow meters, and ultrasonic flow meters, required for system operations and as indicated, "furnished by the Controls Contractor" in the mechanical systems. The Mechanical Contractor is still responsible for coordinating with the Controls Contractor the requirements of said devices based on approved submittals and field condition and installing said devices.
 - b.) Mechanical Systems intended to operate as standalone - The Mechanical Contractor shall provide all parts, labor, components, controls, electrical connections, associated piping, ductwork and wiring required for mechanical systems as shown on the drawings and as required by the manufacturer, to ensure a fully operational, standalone system. The Controls Contractor shall provide any monitoring or set points of said systems as indicated by the contract documents.
2. Systems including but not limited to:
 - Variable refrigerant flow split systems.

- Dust collection systems.
 - Vehicle exhaust systems.
 - Boilers.
 - Paint Booths.
3. The Mechanical Contractor is responsible for storing, coordinating, delivering, hoisting, etc. all Mechanical equipment specified on Drawing M901 Owner Provided Equipment Schedule. The equipment specified on Drawing M901 is being purchased separately by Owner. Mechanical Contractor to provide all associated accessories, Piping and Ductwork to provide a complete system. Any rooftop curbs or support required for this equipment shown on Drawing M901 is the responsibility of the MC to deliver, hoist and install on the roof at its planned location along with the rooftop equipment and coordinating this work with the GC. The MC to coordinate penetration and roofing work with the GC.
 4. See Items 1.a and 1.b above as it relates to the Mechanical Contractor for equipment controls.
 5. MC is responsible for the outdoor unit and ductwork associated with the welding capture system as shown on the M drawings. Everything in the booth including the capture arm is by the GC and is shown as such on the A drawings. The MC shall make the connection between the capture arm and the ductwork.
 6. MC is responsible for the paint booth standalone mechanical system. All other components are spelled out on the drawings for the respective Prime Contractors work.
 - 7.
 8. Coordination:
 - a) Coordination with the work of all of the other contractors.
 - b) Each trade will participate in producing coordination drawings 2D overlays.
 - c) The Mechanical, Plumbing, Electrical and Fire Protection contractors will need to create a BIM model and participate in clash detection meetings once a week. All questions that arise from this meeting will need to be formally RIF'ed. The Mechanical Contractor will be responsible for assembling all trades into one coordination drawing. Coordination drawing to map out heights, routes, etc. to eliminate hits and or obstructions. Ductwork and mechanical piping first, plumbing second, fire protection third, and electrical fourth. A fully coordinated underground coordination drawing must be submitted within a 1 1/2" months of Prime Contract award. This con-

tractor is responsible for laying out its own work, providing sleeves, and coring if required for the installation of this contract work.

9. Temporary Facilities:

- a) a) Provide Temporary Facilities indicated as Work of this Contract in Division 1 "Temporary Facilities and Controls"
- b) b) Temp Heat to be by GC.
- c) c) Include protecting all air intakes by mechanical equipment with filters to help mitigate dust control per IAQ requirements.

10. Construction:

- a) a) The General Construction Contractor is to provide rough opening in walls that require structural support including lintels. Submit to the Construction Manager the name and qualification of the subcontractor performing the installation prior to starting the work.
- b) The General Construction Contractor shall perform all necessary trenching and excavation, backfilling, compaction and new poured in place concrete for all trades outside of the new addition and existing building footprint.
- c) Install all controls components furnished by Controls Contractor into air and hydronic systems as required per the contract documents:
 - 1) Install motor actuated dampers.
 - 2) Install airflow measuring stations.
 - 3) Install airside temperature and pressure sensors.
 - 4) Install hydronic control valves.
 - 5) Install hydronic temperature and pressure sensor wells.
 - 6) Provide TAB and participate and commissioning work.
 - 7) Provide all ductwork as indicated on the drawings.
 - 8) Lifts and scaffold for means and methods of installation of work under this trade the responsibility of the trade.
 - 9) All exposed duct to be painted by this trade.
- d) d) Equipment on Drawing M901 is furnished by owner Installed by mechanical contractor.
- e) Provide all equipment on Drawing M902.
- f) Mechanical equipment controls to be provided by Owner contracted controls vendor,
- g) g) Provide contractor filters, final replacement filters and final duct cleaning.

- h) Provide and install all insulation, painting and labeling of new equipment.
- i) Provide all testing, adjusting and balancing of all HVAC systems.
- j) All fees required for inspections and permits. Building permit by owner
- k) Provide support framing for HVAC equipment, i.e., mechanical equipment curbs.
- l) MC responsible to furnish access doors related to HVAC work rate and non-rated (to be installed by GC)
- m) Provide firestopping and sealing at all HVAC penetrations
- n) m) Furnish the necessary curbs and layout for all roofing penetrations to the General Work Contractor.
- o) n) Provide owner training / commissioning of equipment more than once if needed.
- p) o) Provide replacement of all new unit filters at start up
- q) p) Provide Grilles as shown
- r) q) Provide all condensate drains from mechanical equipment
- s)

C. The Work of the HVAC Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:

1. Division 00 – Procurement and Contracting Requirement, all Sections.
2. Division 01 – General Requirements all Sections, including Temporary Facilities indicated
3. Division 02 – Existing Conditions as required for the Work of this Contract
4. Division 07 - Thermal and moisture protection as required for the Work of this Contract
5. Division 08 - Openings as required for the Work of this Contract
6. Division 11 – Equipment as required for the work of this Contract
7. Division 22 – Plumbing, as required for the Work of this Contract
8. Division 23 – HVAC, all Sections
9. Division 25 – Integration Automation, all Sections for the work of this Contract
10. Division 26 – Electrical, As required for the work of this Contract

1.9 CONTRACT 3 - ELECTRICAL WORK CONTRACT

- A. Work of this Contract includes, but is not limited to, the following descriptions:
1. Includes Electrical Distribution Service, Lighting, CATV systems, Communications, Fire Alarm, Intercom Systems, Emergency Lighting, low voltage wiring for specialty equipment and overhead door controls and other systems traditionally recognized as Electrical work. This includes but is not limited to, all work shown on the "E" drawings as it relates to EC scope of work, and applicable information shown on the following:
 2. Drawings:
 - 1) All "G" Title sheets, general notes Drawings" (General) For coordination
 - 2) All "LS" Drawings (Life Safety) For coordination
 - 3) All "C" Drawings (Civil) as it relates to E contract
 - 4) All "S" Drawings (Structural) For coordination
 - 5) All "A" Drawings (Architectural) as it relates to E contract
 - 6) All "FE" Drawings (Furniture & Equipment) For coordination
 - 7) All "FS" Drawings (Food Service) as it relates to E contract
 - 8) "DJ" Drawings (Piping and Instrumental diagram)
 - 9) All "FP" Drawings (Fire Protection) as it relates to E contract
 - 10) All "P" Drawings (Plumbing) For coordination
 - 11) All "M" Drawings (Mechanical) as it relates to E contract
 - 12) All "E" Drawings (Electrical)
 - 13) All "FA" Drawings (Fire Alarm)
 - 14) All "T" Drawings (Technology)
 - 15) All "TL,TR & TS" Drawings (Audio Visual)
 3. Coordination:
 - a) Coordination with the work of all of the other contractors.
 - b) Each trade will participate in producing coordination drawings 2D overlays.
 - c) The Mechanical, Plumbing, Electrical and Fire Protection contractors will need to create a BIM model and participate in clash detection meetings once a week. All questions that arise from this meeting will need to be formally RIF'ed. The Mechanical Contractor will be responsible for assembling all trades into one coordination drawing. Coordination drawing to map out heights, routes, Etc. to eliminate hits and or obstructions. Ductwork and mechanical piping first, plumbing second, fire protection third, and electrical fourth. A fully coordinated underground coordination drawing must be submitted within a 1 ½" months of Prime Contract award.

- d) Electrical contractor to layout the work of its scope of work when the general contractor is to cut openings requiring structural support and or slab openings.
4. Demolition:
- a) See logistics plans for temp work to be performed by this trade.
 - b)
5. Temporary Facilities: in addition to
- a) Provide Temporary Facilities indicated as Work of this Contract is
 - b) Division 1 Section 01 5000, "Temporary Facilities and Controls"
 - c) Provide night/day security camera system with DVR and monitor for the purpose of monitoring construction activity during the construction schedule only. System will be equipped with local and remote access. See site logistics plan for dramatic placement of security cameras. All cameras are to be mounted on a structurally secured post provided by this contractor and at a height no less than 8'-0". Final location of set up to be chosen by the CM and District.
 - d) Provide new temp electric service near the temp office, power connection and disconnect to CM trailer and one trailer for each prime contractor . Provide and maintain a temporary electric service, including lighting office trailer off the temporary service being provided. Maximum of 1 trailer per Prime Contractor. Each trailer to have a 100 amp, 240 Volt single-phase connections. Assume a diversified peak connected load factor of 12KW per trailer.
 - e) Provide temporary lighting (as required) construction staging/yard/work areas.
 - f) Provide temp and permanent power outlets, panels and connections for other trades tools and equipment. No limit to how many temp services or voltage.
 - g) coordinate with CM/Owner for service activation of existing 400 AMP Single Phase Panel where indicated on Site Logistics Plan. EC to provide temp power for temp. construction activities in new building. EC is responsible for coordinating with other prime contractors for power needs need's, provide several 100 AMP distribution panels for temp service inside the building, and provide appropriate wire to reach from the temp panel to the farthest point of the new building. EC is responsible for the removal of the temp service panel and pole and coordinating with the utility company for this work.
6. Construction:

- a) The General Construction Work Contract shall provide all openings in walls, floors, and roofs for all other Prime Contractors, that require lintels, and structural framing only. All other openings required for the work of this contract, will be the responsibility of this trade.
- b) Provide ALL power wiring to ALL HVAC equipment. (Install motor controllers/disconnects supplied by HVAC Contract) including temp heat units provided by the mechanical contractor.
- c) Provide power to all ADA hardware and electric hardware shown in door hardware schedule. Provide control wiring and connection for electrified door hardware.
- d) Provide all interior and exterior lighting including lighting control.
- e) Provide all fire alarms, and networking systems, WAP and camera wiring.
- f) Fire Alarm devices to be furnished by owner. Electrical contractor is responsible for the complete installation of the fire alarm system and all programming.
- g) Provide public address systems, including full installation and training.
- h) Provide all cutting and patching required installing all electrical fixtures, devices, wire and conduit.
- i) Provide all fees required for inspections and permits other than owner supplied special inspections.
- j) Provide support framing for Electrical equipment and conduits.
- k) Furnish access doors for electrical access (to be installed by GC)
- l) Provide firestopping and sealing of all electrical penetrations
- m) Provide owner training and repeat if necessary
- n) All underground electrical utility work is the responsibility of this contractor. GC is responsible for trenching and backfilling.
- o) Provide new building service and equipment as shown on the drawings.
- p) Switchover over from temporary service to new service to be coordinated with Construction Manager a min. of 1 week in advance and all Prime contractor should be made aware .
- q) This trade is responsible for all communications and coordination with utility companies.
- r) Provide all site light poles and bases
- s) Provide low voltage and contactors to exterior doors for security vendor to punch down to their head equipment.
- t) All security surveillance and equipment and access control devices with headed system to be provided by owners security Contractor. Low Voltage wiring to be provided by Electrical Contractor for these devices.

- u) Provide all Performance Sound & Video Systems and Studio Lighting Systems.
 - 7. General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.
- B. The Work of the Electrical Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. The Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:
- 1. Division 00 – Procurement and Contracting Requirement, all Sections.
 - 2. Division 01 – General Requirements all Sections, including Temporary Facilities indicated
 - 3. Division 02 – Existing Conditions as required for the Work of this Contract
 - 4. Division 07 -Thermal and moisture protection as required for the Work of this Contract
 - 5. Division 08 - Openings as required for the Work of this Contract
 - 6. Division 11 – Equipment as required for the work of this Contract
 - 7. Division 12 – Furnishings as required for the work of this Contract
 - 8. Division 14 – Conveying Equipment as required for the work of this Contract
 - 9. Division 19 – Audio Visual, Section 191000 – Performance Sound & Video Systems, Section 192000 – Studio Lighting Systems
 - 10. Division 21– Fire Supression, as required for the Work of this Contract
 - 11. Division 22 – Plumbing, as required for the Work of this Contract
 - 12. Division 23 – HVAC, as required for the Work of this Contract
 - 13. Division 25 – Integration Automation, as required for the Work of this Contract
 - 14. Division 26 – Electrical
 - 15. Division 27 – Communications
 - 16. Division 28 – Electronic Safety and Security (Review for coordination wiring by EC devices by owner) All devices shall be furnished by the Owner. EC shall provide all wiring and install all devices except for Closed Circuit Surveillance System which will be installed by Owner’s separate contractor.
 - 17. Division 31 – Sitework, as required for the Work of this Contract
 - 18. Division 32 – Exterior Improvements, as required for the Work of this Contract

1.10 CONTRACT 4 - PLUMBING WORK CONTRACT

- A. Work of this Contract includes, but is not limited to, the following descriptions:
1. Includes Water Distribution Service, plumbing fixtures and other systems traditionally recognized as Plumbing work. This includes but is not limited to, all work shown on the "P" as it relates to your scope of work, and applicable information shown on the contract drawings.
 - 2.
 3. Drawings:
 - 1) All "G" Title sheets, general notes Drawings" (General)
 - 2) All "LS" Drawings (Life Safety) For coordination
 - 3) All "C" Drawings (Civil) as it relates to P contract
 - 4) All "S" Drawings (Structural) For coordination
 - 5) All "A" Drawings (Architectural) as it relates to P contract
 - 6) All "FE" Drawings (Furniture & Equipment) as it relates to P contract
 - 7) All "FS" Drawings (Food Service) as it relates to P contract
 - 8) All "FP" Drawings (Fire Protection) as it relates to P contract
 - 9) All "P" Drawings (Plumbing)
 - 10) All "M" Drawings (Mechanical) as it relates to P contract
 - 11) All "E" Drawings (Electrical) as it relates to P contract
 - 12) All "FA" Drawings (Fire Alarm) as it relates to P contract
 - 13) All "T" Drawings (Technology) as it relates to P contract
 - 4.
 5. Coordination:
 - a) Coordination with the work of all of the other contractors.
 - b) Each trade will participate in producing coordination drawings 2D overlays.
 - c) The Mechanical, Plumbing, Electrical and Fire Protection contractors will need to create a BIM model and participate in clash detection meetings once a week. All questions that arise from this meeting will need to be formally RIF'ed. The Mechanical Contractor will be responsible for assembling all trades into one coordination drawing. Coordination drawing to map out heights, routes, Etc. to eliminate hits and or obstructions. Ductwork and mechanical piping first, plumbing second, fire protection third, and electrical fourth. A fully coordinated underground coordination drawing must be submitted within a 1 ½" months of Prime Contract award.

- d) Plumbing contractor to layout the work of its scope of work where the general contractor is to cut openings requiring structural support and or slab openings.

6. Temporary Facilities:

- 1) Provide Temporary Facilities indicated as Work of this Contract I Division 1 Section 01 5000, "Temporary Facilities and Controls"
- 2) Provide temp hose bibs to construction GC for use of all trades.
- 3) Provide backflow preventer and hydrant key for the connection and use to the existing fire hydrant

7. Construction:

- 1) The General Construction Work Contract shall provide all openings in walls, floors, and roofs for all other Prime Contractors, that require lintels, and structural framing only. All other openings required for the work of this contract will be the responsibility of this trade. Slab openings as shown on the contract drawings will be by the GC but layout is by Plumbing contractor.
- 2) Provide all fees required for inspections and permits other than owner supplied special inspections. Building permit by owner.
- 3) Provide all fixtures and associated equipment including carriers if required
- 4) Provide firestopping and sealing of all Plumbing penetrations
- 5) Provide owner training on all new equipment. Record training and submit with closeout documents
- 6) All underground utility work within the footprint of the building and to 5 feet outside the building is the responsibility of this contractor. GC to excavate and backfill for underground work
- 7) This trade responsible for coordinating closely with the utility company and GC for gas and water service and responsible for these service as shown on the "C" Drawings and "P" Drawings.
- 8) General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.

- B. The Work of the Plumbing Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. This Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:

1. Division 00 – Procurement and Contracting Requirement, all Sections.
2. Division 01 – General Requirements all Sections, including Temporary Facilities indicated
3. Division 02 – Existing Conditions as required for the Work of this Contract
4. Division 07 - Thermal and moisture protection as required for the Work of this Contract
5. Division 11 – Equipment as required for the work of this Contract
6. Division 12 – Furnishings as required for the work of this Contract
7. Division 14 – Conveying Equipment as required for the work of this Contract
8. Division 21– Fire Suppression, as required for the Work of this Contract
9. Division 22 – Plumbing
10. Division 23 – HVAC, as required for the Work of this Contract
11. Division 25 – Integration Automation, as required for the Work of this Contract
12. Division 26 – Electrical, as required for the Work of this Contract
13. Division 31 – Sitework, as required for the Work of this Contract
14. Division 32 – Exterior Improvements, as required for the Work of this Contract
15. Division 33 – Utilities, as required for the Work of this Contract

1.11 CONTRACT 5 – FIRE PROTECTION WORK CONTRACT

A. Work of this Contract includes, but is not limited to, the following descriptions:

1. Includes Fire Suppression services, sprinkler head, Stand Pipes and other systems traditionally recognized as Fire Protection work. This includes but is not limited to, all work shown on the "FP" as it relates to your scope of work, and applicable information shown on the contract drawings.
- 2.
3. All "G" Title sheets, general notes Drawings" (General)
4. All "LS" Drawings (Life Safety) For coordination
5. All "C" Drawings (Civil) as it relates to FP contract
6. All "S" Drawings (Structural) For coordination
7. All "A" Drawings (Architectural) as it relates to FP contract
8. All "FE" Drawings (Furniture & Equipment) as it relates to FP contract
9. All "FS" Drawings (Food Service) as it relates to FP contract
10. All "FP" Drawings (Fire Protection)
11. All "P" Drawings (Plumbing) as it relates to FP contract
12. All "M" Drawings (Mechanical) as it relates to FP contract
13. All "E" Drawings (Electrical) as it relates to FP contract

14. All "FA" Drawings (Fire Alarm) as it relates to FP contract
15. All "T" Drawings (Technology) as it relates to FP contract
16. All "TL" "TR" "TS" Drawing (Audio Visual) as it relates to FP contract
- 17.
18. 3. Coordination:
 - a) Coordination with the work of all of the other contractors.
 - b) Each trade will participate in producing coordination drawings 2D overlays.
 - c) The Mechanical, Plumbing, Electrical and Fire Protection contractors will need to create a BIM model and participate in clash detection meetings once a week. All questions that arise from this meeting will need to be formally RIF'ed. The Mechanical Contractor will be responsible for assembling all trades into one coordination drawing. Coordination drawing to map out heights, routes, etc. to eliminate hits and or obstructions. Ductwork and mechanical piping first, plumbing second, fire protection third, and electrical fourth. A fully coordinated underground coordination drawing must be submitted within a 1 ½" months of Prime Contract award.
 - d) Fire Protection contractor to layout the work of its scope of work where the general contractor is to cut openings requiring structural support and or slab openings.
4. Temporary Facilities:
 - 1) Provide Temporary Facilities indicated as Work of this Contract I Division 1 Section 01 5000, "Temporary Facilities and Controls."
5. Construction:
 - 1) The General Construction Work Contract shall provide all openings in walls, floors, and roofs for all other Prime Contractors, that require lintels, and structural framing only. All other openings required for the work of this contract will be the responsibility of this trade. Slab openings as shown on the contract drawings will be by the GC, but layout is by FP contractor.
 - 2) Provide all fees required for inspections and permits other than owner supplied special inspections. Building permit by owner.
 - 3) Provide all associated equipment.
 - 4) Provide firestopping and sealing of all Fire Protection penetrations.
 - 5) Provide owner training on all new equipment. Record training and submit with closeout documents.

- 6) All underground utility work required for Fire Protection is the responsibility of this contractor.
- 7) This trade responsible for all communications and coordination with utility companies for trade scope.
- 8) Provide isolation valves where required be the contract documents and the functionality of this system.
- 9) Provide test location and drain down location as required by the AHJ and the system functionality.
- 10) General Requirements, including but not limited to, additional items specifically indicated as the Work of this Contract.
- 11) This contract is responsible for fire suppression assembly system.
- 12) FP is responsible for all fire department connections and signage.
- 13) FP package is a delegated design package. FP is responsible for design and hydronic calculation package. To be submitted and approved by EOR.
- 14) Shop drawings are to be provided to and coordinated with GC and the rest of the MEP trades.
- 15) See FP-001 for additional contract-specific requirements and FP general notes.

B. The Work of the Fire Protection Work Contract includes but is not limited to the Work that is specified in the Project Manual(s) and as shown on the drawings that form the contract plans. This Contractor is directed to examine all drawings since certain details and/or notes may appear anywhere therein that apply to his/her particular work. This prime contract is defined as, and includes, all Sections in the Divisions indicated by reference, and specific Sections noted:

1. Division 00 – Procurement and Contracting Requirement, all Sections.
2. Division 01 – General Requirements all Sections, including Temporary Facilities indicated
3. Division 02 – Existing Conditions as required for the Work of this Contract
4. Division 07 - Thermal and moisture protection as required for the Work of this Contract
5. Division 11 – Equipment as required for the work of this Contract
6. Division 12 – Furnishings as required for the work of this Contract
7. Division 14 – Conveying Equipment as required for the work of this Contract
8. Division 21– Fire Suppression
9. Division 22 – Plumbing, as required for the Work of this Contract
10. Division 23 – HVAC, as required for the Work of this Contract

11. Division 25 – Integration Automation, as required for the Work of this Contract
12. Division 26 – Electrical, as required for the Work of this Contract
13. Division 27 – Communication, as required for the Work of this Contract
14. Division 28 – Electronic Safety and Security, as required for the Work of this Contract
15. Division 31 – Sitework, as required for the Work of this Contract
16. Division 32 – Exterior Improvements, as required for the Work of this Contract
17. Division 33 – Utilities, as required for the Work of this Contract

1.12

1.13 WORK SEQUENCE

- A. A Construction Manager Superintendent must be always on site when work is being performed. If a contractor fails to maintain the progress as indicated by the milestone schedule by no other fault but its own and requires overtime to complete the work; the contractor shall make arrangements with the Construction Manager 48 hours in advance and pay for a Construction Manager's superintendent at \$150.00 per hour. In the event that the cause for delay is multi-contract, then the costs shall be distributed evenly among contracts. Advise the Construction Manager 48 hours prior to commencing work inside the building. Regardless of schedule and delay, if a contractor wants to work overtime and weekends, the contractor shall make arrangements with the Construction Manager 48 hours in advance and pay for a Construction Manager's superintendent at \$150.00 per hour.
- B. Coordination of any utility and/or power interruption must be done with the Construction Manager. Shutdowns must be coordinated with the Construction Manager and with the least disruption to construction activity.
- C. Construction access to the site shall be limited to those designated for contractor's personnel, equipment and deliveries. Contractors' staging, parking and storage shall be coordinated by the Construction Manager.

1.14 OCCUPANCY REQUIREMENTS

- A. The GC Work Contractor shall provide Outdoor air quality management as specified by the Department of Labor and OSHA during construction.
 1. Provide an exhaust air system for the project indoor areas that could produce fumes, VOC's off-gasses, gasses, dusts, mists, or other emissions.

2. Exhaust air system for the project areas that could produce emissions listed in Paragraph 1 shall be utilized.

B. Quality assurance:

1. Before start of work, submit a design for the exhaust air system. Do not begin work until approval of the Owner is obtained.
2. The number of machines required.
3. Location of the machines in the workspace.

1.15 End Of Contractor Scopes

1.16 PROJECT MILESTONE SCHEDULE

- A. All General Requirement submittals to be submitted with the first 3 weeks of NTP, this includes but is not limited to Bonds (with riders) and Insurances, submittal schedule, Schedule of Values, list of subcontractors and vendors, etc.
- B. Within the 2 ½ Month of NTP General Contractor to provide fully coordinated Master Schedule including all trades activities for Construction Managers Review.
- C. Within the 1st Month of NTP General Contractor to submit the first site logistics plan for review.
- D. Within a 1 ½ Months of the NTP a full coordinated Underground shop drawing must be submitted
- E. Groundbreaking for project must occur no later than Tuesday July 9th, 2024.
- F. Master schedule must include Milestone dates for:
 - Groundbreaking
 - Building Excavation Start and Finish date
 - Foundation Start and Finish
 - Steel Erection Start and Finish
 - Exterior Mock-up review
 - Topping out
 - Building Enclosed and Watertight
 - Interior Program
 - Permanent Power
 - Site work Start and Finish
 - Substantial Completion
 - Move in
 - Final Completion

1.17 ALLOWANCES

A. See Specification Section 01 2100.

END OF SECTION 011200

APPENDIX A

Responsibility Matrix															
	Furnished by Owner's Vendor	Furnished by Owner	Furnished by GC	Furnished by Mechanical Contractor	Furnished by Controls Contractor	Installed by Owner's Separate Contractor	Installed by GC	Installed by Electrical Contractor	Installed by Mechanical Contractor	Installed by Owner's Controls Contractors	Control Wiring by Controls Contractor	Control Wiring by Electrical Contractor	Power Wiring by Electrical Contractor	Power Wiring by Controls Contractor	Notes
Note: For any items not specifically listed, the Prime contractor responsible for the spec section shall provide the item.															
102800 - Toilet and Bath Accessories															
Paper Towel Dispensers	X						X								
Toilet Paper Dispensers	X						X								
Soap Dispensers	X						X								
Sanitary Napkin Dispensers	X						X								
104413 - Fire Protection Cabinets															
Fire Extinguishers	X						X								
Fire Extinguisher Cabinets		X					X								
230900 Building Automation System															
Hydronic Control Valves for New Equipment					X				X					X	
Pipe Mounted Temperature Sensors					X				X						
Dampers					X				X						
Damper Actuators					X				X					X	
Duct Mounted Airflow Stations					X					X					
Fan Inlet Airflow Station					X				X						
Duct Mounted Pressure Sensor					X					X					
Duct Mounted Smoke Detector	X								X						
Variable Frequency Drives									X					X	
Pipe Mounted Pressure Sensors					X				X						
Building Management Control Panel					X					X				X	
Control Relays					X					X					
Current Sensing Device					X					X					
Hydronic Flow Meter															
Fire Alarm Equipment Shut Down Relay	X								X					X	
Smoke Dampers					X									X	
Combination Fire/Smoke Dampers					X									X	
Fire Dampers					X									X	

Responsibility Matrix												
												Notes
Space Occupancy Sensors												
Space CO2 Sensors												
Mechanical Equipment Scheduled on Sheet M901												
Equipment												Refer to 011200 Multiple Contract Summary for specific responsibilities of the mechanical contractor to receive and store equipment
Curbs for Other Than VRF Condensing Units												
Rails for VRF Condensing Units												
Support Stands for VRF Condensing Units												
Mechanical Equipment Scheduled on Sheet M902 or Otherwise Required and NOT on M901												
Equipment												Refer to 011200 Multiple Contract Summary for specific responsibilities of the mechanical contractor to receive and store equipment
Curbs and supports flashed into the roof.												
271600 - Communications Connecting Cords, Devices and Adapters												
Wireless Access Points												
Network Switches and UPS												

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SECTION 011400 - WORK RESTRICTIONS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Modified General Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for Project site work restrictions including, but not limited to, the following;
 - 1. Occupancy requirements.
 - 2. Use of premises.
 - 3. Area available for use.
 - 4. Travel not obstructed.
 - 5. Phasing.
 - 6. Uniform Safety Standards for School Construction and Maintenance Projects.
 - 7. Smoking policy.
 - 8. Product delivery, storage and handling.
- B. Related Sections include the following:
 - 1. Division 1 Section "Summary of Multiple Contracts" for additional work restriction requirements.

1.3 OCCUPANCY REQUIREMENTS

- A. Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations.
 - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
 - 2. The Owner will obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
 - 3. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will provide, operate, and maintain mechanical and electrical systems serving occupied portions of building.
 - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

1.4 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated. Confine operations to areas within Contract limits indicated. Do not disturb portions of site beyond areas in which the Work is indicated. No signs or advertising are allowed except as approved by Architect or as required by laws, regulations or the Prime Contractor's protection as persons and property.
1. Limits: Prime Contractors shall comply with Owner occupancy, and phasing requirements.
 - a. Prime Contractors shall limit operations including storage of materials and prefabrication to areas within the Contract Limit Lines unless otherwise permitted by Owner's Project Representative at the Owner's option.
 - b. Prime Contractors shall limit use of the premises for Work and for storage, to allow for:
 - 1) Owner occupancy & use.
 - 2) Work by other Prime Contractors.
 - 3) Work by Owner.
- B. Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.
1. Keep all areas free from accumulation of waste material, rubbish or construction debris on daily basis.
 2. Prime Contractors shall provide temporary closures at all openings in outside walls to maintain weather protection and security as directed by Owner's Project Representative.
 3. Open fires are not permitted.
- C. Prime Contractors shall coordinate the use of premises with the Owner through Owner's Project Representative and shall move any stored products under Prime Contractor's control, including excavated material, which interfere with operations of the Owner or separate contractors, at no expense to Owner.
- D. Prime Contractors shall assume full responsibility for the protection and safekeeping of products under Contract, stored on the site and shall cooperate with the Owner's Project Representative to insure security for the Owner's property.
- E. Lockout Tagout Policy: Each Prime Contractor shall follow this policy in addition to requirements of regulating authorities. Prime Contractors shall not circumvent or complicate Lockout Tagout Policy.
1. At progress meetings, each Prime Contractor shall indicate extent of their Work with Owner's Project Representative for the period up to the next progress meeting.

- a. Each Prime Contractor shall identify all valves, disconnect devices or other devices requiring manipulation or turn off/on to District's Superintendent of Buildings and Grounds.
 - b. District's maintenance personnel will manipulate devices per Superintendent's directive only.
 - c. District's maintenance personnel will use Lockout Tagout procedure on all valves, disconnect devices and other devices.
 - d. Devices not coordinated during progress meeting shall be coordinated through the Owner's Project Representative. Provide 48-hour notice of required action.
- F. Protection of Equipment Material: Each Prime Contractor shall assume full and complete responsibility for protection and safekeeping of products and equipment stored and install at Project.
- G. Areas of Special Protection
1. Operations of the Contractor may not block, hinder, impede, or otherwise inhibit the safe and expeditious exiting of the building's occupants during an emergency.
 2. In the event of an emergency (designated by the sounding of the fire alarm system) all construction activities must immediately cease. Contractor's work force will evacuate themselves from work areas and remain outside of work areas until the "all clear" is given. No work operations will be tolerated during the evacuation of the building or during an emergency.
- 1.5 AREA AVAILABLE FOR USE
- A. Prime Contractors shall confine operations to those portions of the Owner's property, and to the right-of-ways or easements, temporary or permanent, acquired or designated for the work of the Contract as shown on the Drawings. Private property adjacent the Site shall not be entered upon or used by the Prime Contractors for any purpose without the written consent of the Owner thereof. A copy of such consent shall be filed with the Owner's Project representative.
- 1.6 TRAVEL NOT OBSTRUCTED
- A. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
1. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

- B. Each Prime Contractor shall not needlessly hinder or inconvenience travel on any public or private way, nor wholly obstruct a traveled way, and shall provide plain, appropriately worded signs, adequate barricades and lighting announcing such obstruction at the nearest cross streets, and at each end of the obstructed portion, directing traffic to and along an approved detour.

1.7 PHASING

- A. Prime Contractor shall assume full responsibility for Project Phasing requirements (See Exhibits A for Project Schedule & Phasing Plan). Coordinate with Owner's Project representative the following:
 - 1. Shut down of utilities.
 - 2. Deliveries.
 - 3. Change over of utilities.
 - 4. Painting prior to installation of equipment in areas not accessible after equipment installation.
 - 5. Inspection of systems and equipment prior to any Prime Contractor concealing items in walls, floors and ceilings.
 - 6. Testing and inspection agency requirements.
- B. Notify Owner's Project Representative of Construction Schedule modifications in writing at each progress meeting.

1.8 UNIFORM SAFETY STANDARDS FOR SCHOOL CONSTRUCTION AND MAINTENANCE PROJECTS

- A. The occupied portion of any school building shall always comply with the minimum requirements necessary to maintain a certificate of occupancy.
- B. General Safety and Security Standards for Construction Projects:
 - 1. All construction material shall be stored in a safe and secure manner.
 - 2. Fences around construction supplies or debris shall be maintained.
 - 3. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
 - 4. During exterior renovation work, overhead protection shall be provided for any sidewalk or areas immediately beneath the work site or such areas shall be fenced off and provided with warning signs to prevent entry.
 - 5. Workers shall be required to wear photo-identification badges at all times for identification and security purposes while working at occupied sites.

- C. Separation of Construction Areas from Occupied Spaces: Construction areas that are under the control of a Contractor and therefore, not occupied by district staff or students shall be separated from occupied areas. Provisions shall be made to prevent the passage of dust and contaminants into occupied parts of the building. Periodic inspection and repairs of the containment barriers must be made to prevent exposure to dust or contaminants. Gypsum board assemblies must be used in exit ways or other areas that required fire rated separation. Heavy-duty plastic sheeting may be used only for a vapor, fine dust or air infiltration barrier, and shall not be used to separate occupied spaces from construction areas.
1. A specific stairwell and/or elevator shall be assigned by the Construction Manager for construction worker use during work hours. In general, workers may not use corridors, stairs or elevators designated for students or school staff.
 2. Large amounts of debris must be removed by using enclosed chutes or a similar sealed system. There shall be no movement of debris through hallways of occupied spaces of the building. No material shall be dropped or thrown outside the walls of the building.
 3. All occupied parts of the building affected by renovation activity shall be cleaned at the close of each workday. School buildings occupied during a construction project shall maintain required health, safety and educational capabilities at all times that classes are in session.
- D. Construction and maintenance operations shall not produce noise in excess of 60 dba in occupied spaces or shall be scheduled for times when the building or affected building spaces are not occupied or acoustical abatement measures shall be taken.
- E. Prime Contractors shall be responsible for control of chemical fumes, gases, and other contaminants produced by the work to ensure they do not enter occupied portions of the building or air intakes.
- F. Prime Contractors shall be responsible to ensure that activities and materials which result in off-gassing of volatile organic compounds such as glues, paints, furniture, carpeting, wall covering, drapery, etc., are scheduled, cured or ventilated in accordance with manufacturers recommendations before a space can be occupied.
- G. Prime Contractors shall provide temporary partitions and / or systems as required to prevent the migration of airborne contaminants from unoccupied areas or the exterior work areas, into occupied areas during construction operations.
- H. Large and small asbestos abatement projects as defined by 12NYCRR56 shall not be performed while the building is occupied". The term "building" ,", as referenced in this section, means a wing or major section of a building that can be completely isolated from the rest of the building with sealed non- combustible construction. The isolated portion of the building must contain exits which do not pass through the occupied portion and the ventilation systems must be physically separated and sealed at the isolation barrier.

1. Exterior work such as roofing, flashing, siding, or soffit work may be performed on occupied buildings provided proper variances are in place as required, and complete isolation of ventilation systems and at windows is provided. Care must be taken to schedule work so that classes are not disrupted by noise or visual distraction.

1.9 SMOKING POLICY

- A. Use of tobacco at all Work sites, job office, parking lots and of Owner's property is prohibited. Use of tobacco may result in removal from Owner's property.
- B. This policy shall apply to all individuals entering a Work site or Owner's property including, but not limited to, part-time personnel, consultants, and employees of other companies or Prime Contractor's employees, sub-consultants, installers, etc., working on Project site.

1.10 PRODUCT DELIVERY STORAGE AND HANDLING

- A. Deliver, store and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturers written instructions.
 1. Schedule delivery to minimize long-term storage at Project site and to prevent over crowdingovercrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instruction for handling, storing, unpacking, protecting, and installing.
 4. Prime Contractor shall inspect products on delivery to ensure correct products have been delivered and are in compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store materials in a manner that will not endanger Project structure.
 6. Store products to allow for inspection and measurement of quantity or counting of units.
 7. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
 8. Comply with product manufacturer's written instruction for temperature, humidity, ventilation, and weather-protection requirements for storage.
 9. Protect stored products from damage.

PART 2 PART 2 – PRODUCTS (NOT USED)

PART 3 PART 3 – EXECUTION (NOT USED)

END OF SECTION

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SECTION 011410 - NYSED 155.5 REGULATIONS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies requirements of 8NYCRR155.5, Uniform Safety Standards for School Construction and Maintenance Projects, which are required in construction documents. The Contractor shall comply with these requirements in addition to any and all similar requirements in the Contract Documents.

1.3 REQUIREMENTS

- A. The occupied portion of any school building shall always comply with the minimum requirements necessary to maintain a certificate of occupancy. In addition, the following shall be strictly enforced and cooperated with:
 - 1. No smoking is allowed on public school property, including construction areas.
 - 2. During construction daily inspections of district occupied areas shall be conducted by school district personnel to assure that construction materials, equipment or debris do not block fire exits or emergency egress windows.
 - 3. Proper operation of fire extinguishers, fire alarm, and smoke/fire detection systems shall be maintained throughout the project
- B. Verify that all school areas to be disturbed during renovation or demolition have been or will be tested for lead and for asbestos. For any project work that disturbs surfaces that contain lead or asbestos, follow the plans and specifications prepared by a certified Lead Risk Assessor or Supervisor which details provisions for occupant protection, worksite preparation, work methods, cleaning, and clearance testing; which are in general accordance with HUD Guidelines.
 - 1. All asbestos abatement projects shall comply with all applicable federal and State laws including but not limited to the New York State Department of Labor industrial code rule 56(12NYCRR56), and the federal Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Part 763 (Code of Federal Regulations, 1998 Edition); available at the Office of Facilities Planning, Education Building Annex, Room 1060, State Education Department, Albany, NY 12234.

2. Any construction or maintenance operations which will disturb lead-based paint will require abatement of those areas pursuant to protocols detailed in the "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing", June 1995; U.S. Department of Housing and Urban Development (HUD), Washington, D.C. 20410; available at the Office of Facilities Planning, Education Building Annex, Room 1060, State Education Department, Albany, NY 12234.
- C. General Safety and Security Standards for Construction Projects:
1. All construction materials shall be stored in a safe and secure manner.
 2. Fences around construction supplies or debris shall be maintained.
 3. Gates shall always be locked unless a worker is in attendance to prevent unauthorized entry.
 4. During exterior renovation work, overhead protection shall be provided for any sidewalks or areas immediately beneath the work site or such areas shall be fenced off and provided with warning signs to prevent entry.
 5. Workers shall be required to wear photo-identification badges at all times for identification and security purposes while working at occupied sites.
- D. Separation of construction areas from occupied spaces. Construction areas which are under the control of a contractor and therefore not occupied by district staff or students, shall be separated from occupied areas. Provisions shall be made to prevent the passage of dust and contaminants into occupied parts of the building. Periodic inspection and repairs of the containment barriers must be made to prevent exposure to dust or contaminants. Gypsum board must be used in exit ways or other areas that require fire rated separation. Heavy duty plastic sheeting may be used only for a vapor, fine dust or air infiltration barrier, and shall not be used to separate occupied spaces from construction areas.
1. A specific stairwell and/or elevator should be assigned for construction worker use during work hours. In general, workers may not use corridors, stairs or elevators designated for students or school staff.
 2. Large amounts of debris must be removed by using enclosed chutes or a similar sealed system. There shall be no movement of debris through halls of occupied spaces of the building. No material shall be dropped or thrown outside the walls of the building.
 3. All occupied parts of the building affected by renovation activity shall be cleaned at the close of each workday. School buildings occupied during a construction project shall maintain required health, safety and educational capabilities at all times that classes are in session.
- E. The Architect will prepare phasing plans indicating exiting, required by the applicable building code, which shall be maintained during construction.

1. The Contractor shall submit plans, to be approved by the Architect, indicating temporary construction required to isolate construction equipment, materials, people, dust, fumes, odors, and noise during the construction period and meeting the requirements of the phasing plans.
 2. Temporary construction details shall meet code-required fire ratings for separation and corridor enclosure.
 3. At a minimum, required exits, temporary stairs, ramps, exit signs, and door hardware shall be provided at all times.
- F. Prepare a plan detailing how adequate ventilation will be maintained during construction.
1. The plan shall indicate ductwork which must be rerouted, disconnected, or capped in order to prevent contaminants from the construction area from entering the occupied areas of the building.
 2. The plan shall also indicate how required ventilation to occupied spaces affected by construction will be maintained during the project.
- G. Construction and maintenance operations shall not produce noise in excess of 60 dba in occupied spaces or shall be scheduled for times when the building or affected building spaces are not occupied or acoustical abatement measures shall be taken.
- H. The contractor shall be responsible for the control of chemical fumes, gases, and other contaminants produced by welding, gasoline or diesel engines, roofing, paving, painting, etc. to ensure they do not enter occupied portions of the building or air intakes.
- I. The contractor shall be responsible to ensure that activities and materials which result in "off-gassing" of volatile organic compounds such as glues, paints, furniture, carpeting, wall covering, drapery, etc. are scheduled, cured or ventilated in accordance with manufacturers recommendations before a space can be occupied.
- J. Large and small asbestos abatement projects as defined by 12NYCRR56 shall not be performed while the building is occupied. The term "building", as used in this paragraph, means a wing or major section of a building that can be completely isolated from the rest of the building with sealed non-combustible construction. The isolated portion of the building must contain exits that do not pass through the occupied portion, and ventilation systems must be physically separated and sealed at the isolation barrier.
- K. Exterior work such as roofing, flashing, siding, or soffit work may be performed on occupied buildings provided proper variances are in place as required, and complete isolation of ventilation systems and at windows is provided. Care must be taken to schedule work so that classes are not disrupted by noise or visual distraction.

END OF SECTION

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SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
 - 2. Certain unforeseen items may arise during the construction and/or the requirements for items that could not be accurately detailed in advance may become apparent during the construction, which will require work to be added to one or more Prime Contract's Scope(s). Actual work, if and where necessary, shall be defined at a later date when additional information is available for evaluation.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Requirements:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders and Allowance Use Authorizations.
 - 2. Division 01 Section "Payment Procedures" for procedures governing the Schedule of Values for Allowances.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date, advise Architect of the date when final selection and purchase of each product or system described by an Allowance Use must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each Allowance Use for use in making final selections. Include recommendations that are relevant to performing the Work.

- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in Allowance Uses, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for Allowance Use items with other portions of the Work.

1.6 COORDINATION

- A. Coordinate Allowance Use items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Field Orders/Directives from the Architect and/or Construction Manager that indicate amounts to be charged to the allowance. Overhead, profit, and Bond Premium are not an allowable cost for work completed under the allowance.
- B. Prime Contractor's related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Field Orders authorizing use of funds from the contingency allowance shall include all Prime Contract related costs other than overhead, profit, and corresponding bond premium adjustment. One or more of the following methods, which will be specified in the written directive, shall determine the value of the Work directed under this allowance.
 - 1. By applying the applicable price or prices set forth in the Contract Documents or by applying a Unit Price agreed to by both parties.

2. By estimating the fair and reasonable cost of:
 - a. Labor including all wages, required wage supplements and insurance required by law (workers' compensation, social security, disability, unemployment, etc.) paid to or on behalf of foremen, workers, and other employees below the rank of Prime Contract designated representative directly employed at the site.
 - b. Materials.
 - c. Equipment, excluding hand tools.
 3. Time and Materials
 4. The Owner reserves the right to utilize these methods provided it notifies the Prime Contract of its intent to do so prior to the time the Prime Contract is properly authorized to commence performance of such work.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.
- E. Unused Materials:
1. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 2. If requested by Architect and/or Construction Manager, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Include in the base bid allowances in the amount/area listed below for all scope pertaining to Newburgh Enlarged City School District:
1. \$300,000.00 Allowance for Rock Removal for Site Work: GC-01 General Construction / Site Work Contract.
 2. \$50,000.00 Allowance for Exterior Building Signage and Signage Behind Front Entrance Desk: GC-01 General Construction / Site Work Contract.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit price shall be used when and if required by Owner through Architect for all additions and deletions to the Contract quantities and shall be inclusive of furnishing and installing all necessary material, plus costs for delivery, insurance, labor, overhead, profit, equipment, hoisting, scaffolding, trucking, handling, submissions, layout, permits, coordination, hangers, inserts, couplings, testing, delivery, supervision, etc. as per change orders, and shall remain installed in quantities and locations as approved by the Architect/Construction Manager.
- B. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- C. List of Unit Prices: A list of unit prices is included in the Bid Form. Specification Sections contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

1. Refer to Bid Form for list of Unit Prices.

END OF SECTION 012200

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 GENERAL

- A. Should the Contractor desire to substitute other articles, materials, apparatus, products or processes than those specified or approved as equal, the Contractor shall apply to the Architect in writing for approval of such substitution. It should be noted that the bid shall not be based on a substituted article, material, apparatus, product or process. With the application shall be furnished such information as required by the Architect to demonstrate that the article, material, apparatus, product or process he wishes to use is the equivalent of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended. The Contractor shall set forth the reasons for desiring to make the substitution and shall further state what difference, if any, will be made in the construction schedule and the contract price for such substitution should it be accepted; it being the intent hereunder that any savings shall accrue to the benefit of the Owner.
- B. The Architect shall reject any such desired substitution as not being specifically named in the contract, or if he shall determine that the adjustment in price in favor of the Owner is insufficient, the Contractor shall immediately proceed to furnish the designated article, material, apparatus, product or process.
- C. Request for substitutes shall conform to the requirements of this Article.
- D. Requests for substitutions shall, include full information concerning differences in cost, and any savings in cost resulting from such substitutions shall be passed on to the Owner.
- E. Requests for utilization of substitutes will be reviewed during the course of the project. The impact on the project and the timeliness of submission will be of key consideration.
- F. The approval of utilization of a substitute is subject to the sole and final discretion of the Architect.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
 - 1. Division 01 Section "Allowances" for products selected under an allowance.
 - 2. Division 01 Section "Alternates" for products selected under an alternate.

3. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
4. Division 01 Section "Submittals" for submittal procedures.
5. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions..

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.
- B. Substitute Items (Or Equal): If in Architect/Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item it will be considered a proposed substitute item.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 1. Substitution Request Form: Use form provided in Project Manual.
 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication, or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.

- f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
 - n. See additional requirements in Article 2.3 DETAILED SUBSTITUTION
 - o. PROCEDURES
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within five days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 10 days of receipt of request, or five days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 PRODUCTS

2.1 SUBSTITUTION PROCEDURES (GENERAL)

- A. Conditions: After the 'Notice of Award" and prior to the Contractor entering into a Formal Contract with the Owner, the Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
1. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 2. Substitution results in substantial cost savings to the Owner or substantial performance improvements.
 3. Substitution request is fully documented and properly submitted.
 4. Requested substitution will not adversely affect Contractor's construction schedule.
 5. Requested substitution has received necessary approvals of authorities having jurisdiction.
 6. Requested substitution is compatible with other portions of the Work.
 7. Requested substitution has been coordinated with other portions of the Work.
 8. Requested substitution provides specified warranty.
 9. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 10. The substitution is submitted in compliance with Article 2.3 DETAILED SUBSTITUTION PROCEDURES
- B. If the Contractor does not present 'Substitutions" in the time frame noted above any future requests to substitute products will not be considered, unless the substitution is for cause.
- C. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

2.2 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 20 days prior to time required for preparation and review of related submittals.
1. Architect will consider Contractor's request for substitution when the following conditions are present.
 - a. The specified product is not available
 - b. The specified product cannot be delivered in the time frame required under the Project Schedule.

2. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice of Award and based on the following:
 1. The proposed product substitution will result in a significant cost savings to the Owner.
 2. The proposed product has substantial performance improvements.
 3. The proposed product can be provided much earlier in the schedule enhancing the project completion date.
 4. The proposed product warranty is superior to the specified item.

2.3 DETAILED SUBSTITUTION REVIEW PROCEDURES

- A. The Architect in addition to the requirements listed above will require compliance with the following requirements and procedures.
 1. Requests for approval of substitutions will be received and considered from Prime Contractors only and not from manufacturers, suppliers, Subcontractors, or other third parties.
 2. If the materials and equipment submitted are offered as substitutions to the Contract Documents or approved equal, the Contractor shall advise the Owner and the Architect of the requested substitutions and comply with the requirements hereinafter specified in this Article.

3. Where the acceptability of substitution is conditioned upon a record of and the proposed substitution does not fulfill this requirement, the Architect, at the Architect's sole discretion, may accept the substitution if the Contractor provides a bond or cash deposit which guarantees replacement at no cost to the Owner for any failure occurring within a specified time. The substitution item must meet all other technical requirements contained in the Specification.
4. The Contractor shall furnish such information as required by the Architect to demonstrate that the equal article, material, apparatus, product or process is the equivalent of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended and/or that it offers substantial benefits to the Owner in saving of time and/or cost. The Contractor shall set forth the reasons for desiring to make this substitution.
5. Contractor shall submit:
 - a. For each proposed request for approved substitute sufficient details, complete descriptive literature and performance data together with samples of the materials, where feasible, to enable the Architect to determine if the proposed request for approval should be granted, including manufacturer's brand or trade names, model numbers, description of specification of item, performance data, test reports, samples, history of service, and other data as applicable.
 - b. Certified tests, where applicable, by an independent laboratory attesting to the performance of the substitute.
 - c. A list of installations where the proposed substitute equipment or materials is performing under similar conditions as specified.
 - d. A list of installations where the proposed substitute equipment or materials is performing under similar conditions as specified.
6. Where the approval of a substitute requires revision or redesign of any part of Work, including that of other Contracts, all such revision and redesign, and all new drawings and details required therefore, shall be provided by the Contractor at its own cost and expense, and shall be subject to the approval of the Architect.
7. In the event that the Architect is required to provide additional services, then the Architect's charges for such additional services shall be paid by the Contractor to the Owner.
8. Any modifications in the Work required under other contracts to accommodate the changed design will be incorporated in the appropriate contracts and any resulting increases in contract prices will be charged to the Contractor by the Owner who initiated the changed design.
9. In all cases, the Architect shall be the judge as to whether a proposed substitute is to be approved. The Contractor shall be bound by the Architect's decision. No substitute items shall be used in the Work without written approval of the Architect.
10. In making request for approval of substitute, Contractor represents that:

- a. Contractor has investigated proposed substitute and determined that it is equal to or superior in all respects to the product, manufacturer or method specified or offers other specified advantages to the Owner.
 - b. Contractor will provide the same or better warranties or bonds for proposed substitute as for product, manufacturer or method specified.
 - c. Contractor waives all claims for additional costs or extension of time related to proposed substitute that subsequently may become apparent.
 - d. Contractor shall have and make no claim for an extension of time or for damages by reason of the time taken by the Architect in considering a substitute proposed by the Contractor or by reason of failure of the Architect to approve a substitute proposed by the Contractor. Any delays arising out of consideration, approval, or utilization of a substitute shall be the sole responsibility of the Contractor requesting the substitute and it shall arrange its operations to make up the time lost.
11. Proposed substitute will not be accepted if:
- a. Acceptance will require substantial revision of Contract Documents.
 - b. Acceptance will substantially change design concepts or Technical Specifications.
 - c. Acceptance will delay completion of the Work, or the Work of other Contractors.
 - d. If the Substitute item is not accompanied by formal request for approval of substitute from Contractor.
12. The Architect reserves the right to disapprove, for aesthetic reasons, any material or equipment on the basis of design or color considerations alone, without prejudice to the quality of the material or equipment, if the manufacturer cannot meet the required colors or design.
13. All requests for approval of substitutes of materials or other changes from the contract requirements shall be accompanied by an itemized list of all other items affected by such substitution or change. The Architect shall have the right, if such is not done, to rescind any approvals for substitutions and to order such Work removed and replaced with Work conforming to the specified requirements of the contract, all at the Contractor's expense, or to assess all additional costs resulting from the substitution to the Contractor.
14. Approval of a substitute will not relieve Contractor from the requirement to submit Shop Drawings or any of the provisions of the Contract Documents.

15. In the event that the Architect is required to provide additional services as a result of a request for approval of a substitute results in changes by the Contractor in dimension, weight, power requirements, etc., of the equipment and accessories furnished, or as a result of Contractor's errors, omissions or failure to conform to the requirements of the Contract Documents or if the Architect is required to examine and evaluate any changes proposed by the Contractor solely for the convenience of the Contractor, or for evaluation of deviations from Contract Documents, then the Architect's charges in connection with such additional services shall be paid by the Contractor.
16. Structural design shown on the Drawings is based upon the configuration of and maximum loading for major items of equipment as indicated on the Drawings and as specified. If the substituted equipment furnished differs from said features, the Contractor shall pay to the Owner all costs of redesign and for any construction changes required to accommodate the equipment furnished, including the Architect's charges in connection therewith.
 - a. The Contractor shall respond to required submittals with complete information and with a degree of accuracy to achieve approvals within two (2) submissions. All costs to the Architect involved with subsequent submissions of Shop Drawings, Samples or other items requiring approval, will be paid by the Contractor to the Owner, by deducting such costs from payments due for Work completed. In the event an approved item is requested by the Contractor to be changed or substituted for, all costs involved in the reviewing and approval process will likewise be back charged to the Contractor unless determined by the Architect that the need for such substitution and/or deviation from Contract Documents is beyond the control of the Contractor.
 - 1) EXECUTION (Not Applicable)

END OF SECTION 012500

END OF SECTION

SECTION 012519 - EQUIVALENTS

PART 1 GENERAL

1.1 SUMMARY

- A. Requirements set forth herein pertain to products specified in divisions included in project manual.

1.2 DEFINITIONS

- A. For the purpose of this contract, the words "similar", "equal to", "or equal", "equivalent" and such other words of similar content and meaning, shall be deemed to mean similar and equal to one of named products.
- B. For the purpose of bidding documents, the word "products" shall be deemed to include the words "articles", "materials", "items", "equipment" and "methods". Whenever in contract documents one or more products are specified, words "similar, equivalent, and equal to" shall be deemed inserted.
- C. Where, in these specifications or on drawings, certain kinds, types, brands, or manufacturers of materials are named, they shall be regarded as required standard of quality. Where two or more are named these are presumed to be equal, and Contractor may select one of those items.
- D. If Contractor desires to use any kind, type, brand, or manufacturer of material other than those named in specification, he may submit the request for approval to the Architect well in advance of the bid date.
- E. Requests for approval of proposed equivalents will be received by Architect only from the Contractor.
- F. If the Architect approves a proposed equivalent prior to receipt of Bids, such approval will be set forth in an Addendum.
- G. After the bid opening the apparent low bidder or bidders will be notified by the Architect or Owner and shall submit to the Architect in writing, within ten (10) calendar days what equivalent kind, type, brand, or manufacture is included in bid in lieu of specified items. No equivalents will be considered after this submission.
- H. Contractor shall have burden of proving, at Contractor's own cost and expense, to satisfaction of Owner/Architect, that proposed product is similar and equal to named product. In making such determination Owner/Architect will be sole judge of objective and appearance criteria that proposed product must meet in order for it to be approved.

1. Supporting data on equivalency is responsibility of bidder. For each equivalent to base specification, included in products list, submit information describing in specific detail:
 - a. a. Wherein it differs from quality and performance required by base specification.
 - b. b. Changes required in other elements of work because of equivalent.
 - c. c. Effect on construction schedule.
 - d. d. Any required license fees or royalties.
 - e. e. Availability of maintenance service, and source of replacement materials.
 - f. f. Such other information as may be required by Owner.
 - I. Owner, through Architect, shall be judge of acceptability of proposed equivalents. Risk of whether bid equivalents will be accepted is borne by Contractor.
- 1.3 CONTRACTOR'S REPRESENTATION:
- A. Submission of an equivalent product and/or material constitutes a representation that Contractor:
 1. Has investigated proposed product and determined it is equal to or superior in all respects to that specified. **QUALITY ASSURANCE**
 - a. Will provide same warranties or bonds for equivalent as for product specified.
 2. Will coordinate installation of an accepted equivalent into work and make such other changes as may be required to make work complete in all respects.
 - a. 4. Waives all claims for additional costs, under his responsibility, which may subsequently become apparent.
 - b. 5. Will provide, at own cost and expense, any different quantity and/or arrangement of ductwork, piping, wiring, conduit or any part of work from that specified, detailed or indicated in Contract Documents if required for proper installation of an approved equivalent.
 - c. 6. Will provide, at own cost and expense, all such revision and redesign and all new drawings and details required by Architect for approval if proposed equivalent product requires a revision or redesign of any part of work covered by this contract.
 - d. 7. Provide complete documentation on both the product specified and the proposed substitute, including the following information as appropriate:
 - 1) Point-by-point comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
 - 2) Copies of current, independent third-party test data of salient product or system characteristics.
 - 3) Samples where applicable or when requested by Architect.

- 4) Detailed comparison of significant qualities of the proposed substitute with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- 5) Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
- 6) Research reports, where applicable, evidencing compliance with building code in effect for Project, from ICC-ES.
- 7) Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will become necessary to accommodate the proposed substitute.
 - a) Provide certification by manufacturer that the substitute proposed is equal to or superior to that required by the Procurement and Contracting Documents, and that its in-place performance will be equal to or superior to the product or equipment specified in the application indicated.
 - b) Bidder, in submitting the Procurement Substitution Request, waives the right to additional payment or an extension of Contract Time because of the failure of the substitute to perform as represented in the Procurement Substitution Request.

B. EQUIVALENT CERTIFICATION:

1. Contractor must sign the "Equivalent Certification" following this specification section and deliver it to the Architect along with a complete list of proposed equivalents within ten (10) calendar days after notification from the Architect or Owner. This is mandatory and must be done prior to award of contracts.

END OF SECTION 012519

END OF SECTION

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SECTION 012600 - – CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
 - 1. The provisions of this section apply to each prime contract.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" or CSArch standard Change in Condition (CIC) form.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect or Construction Site Coordinator will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect or the Construction Site Coordinator are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 5 days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.

- d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 4. Include costs of labor and supervision directly attributable to the change.
 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Proposal Requests or CSArch standard "Change in Condition (CIC) form clearly identifying the change in condition.

1.5 ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, base each proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
1. Include installation costs in purchase amount only where indicated as part of the allowance.
 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 3. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor and installation. Submit claims within 10 days of receipt of the G170 or Change in Condition (CIC) or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 30 days after such authorization.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Proposal cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher or lower priced materials or systems of the same scope and nature as originally indicated.

1.6 CHANGE ORDER PROCEDURES

- A. BEFORE PROCESSING CHANGE ORDERS, ALL CHANGE ORDER PROPOSALS FROM THE CONTRACTOR SHALL INCLUDE A COVER SHEET AND THE NECESSARY SUPPORT DOCUMENTS ('BACK-UP') ILLUSTRATING THE PROPOSED DOLLAR AMOUNT ON THE COVER SHEET. THE ARCHITECT-OF-RECORD WILL NOT CONSIDER A PROPOSAL UNTIL ALL CHANGE ORDER PROPOSALS ARE PREPARED FOLLOWING THE DIRECTIONS LISTED BELOW.
- B. On Owner's approval of a Proposal Request or Change in Condition, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701 or equivalent form produced by Architect's project management software.
 - 1. All quotations shall be accompanied by a complete itemization of costs, including labor (type, quantity and unit cost per hour), materials (type, quantity and unit cost) and copies of written quotations from subcontractors and suppliers itemized in the same manner.
 - a. Overhead shall be determined based upon the requirements set forth in the AIA Document A232 - 2019 General Conditions of the Contract for Construction.
 - b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
 - 2. The combined overhead and profit included in the total cost to the Owner shall be based on the requirements set forth in the AIA Document A232 - 2019 General Conditions of the Contract for Construction.
 - 3. Performance and Payment Bond Adjustments: Do not itemize increased bond premiums for each individual Change Order per General Conditions of the Contract, paragraph 11.4.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect or Construction Site Coordinator may issue a Construction Change Directive on CSArch standard Change in Condition (CIC) form. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

3.1 END OF SECTION 012600

END OF SECTION

SECTION 012900 - - PAYMENT PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including the requirements set forth in the AIA Document A232 - 2019 General Conditions of the Contract for Construction and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Use the approved Schedule of Values form for each Application for Payment.

1.5 APPLICATIONS FOR PAYMENT

- A. Submit Applications for Payment only after Schedule of Values have been approved.
- B. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
 - 1. List of subcontractors.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule (preliminary if not final.)
 - 4. Products list.
 - 5. Schedule of unit prices.
 - 6. Submittals Schedule (preliminary if not final.)
 - 7. List of Contractor's staff assignments.
 - 8. List of Contractor's principal consultants.
 - 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
 13. Performance and payment bonds.
 14. Data needed to acquire Owner's insurance.
 15. Initial settlement survey and damage report if required.
- C. Each Application for Payment shall be consistent with previous applications and payments as certified by the Construction Manager and Architect as to the actual value of the Work, which will be completed by the end of the month and paid for by Owner.
1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- D. Payment Application Times: The date for each progress payment is the 30th day of each month.
1. This date is a basis of cycle time, and shall be confirmed at the Pre-Construction Conference, based on the owner's requirements for processing Applications for Payment. The owner reserves the right to adjust this cycle if necessary, with payments executed net 30 days."
- E. Draft copies (pencil copies) shall be submitted to the Construction Manager, by the same day of the month, for the duration of the project. This day shall be established at the Pre-Construction Conference, based on the owner's requirements for processing Applications for Payment. This day may be modified from time to time to accommodate the Owners schedule.
1. Reflect an accurate accounting of the Work completed and material stored at the time of the pencil copy submission. Projections of work anticipated to be completed or stored is not allowed.
 2. Final copies, including review adjustments, shall be submitted to Architect by the 27th day of the month.
 - a. Provided that a fully executed and complete Application for Payment is submitted on the 27th day of each month, the Owner will receive requisitions by the 10th day of the next month.
- F. Payment Application Forms: Use approved Schedule of Values as form for Application for Payment.
1. Provide itemized data on the Continuation Sheet. Format, schedules, line items, and values shall be those of the approved Schedule of Values.
- G. Application Preparation: Complete every entry on the form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data of the approved Schedule of Values.
 2. Provide updated Prime Contractor Construction Schedule with each application.

- H. Transmittal: Submit five (5) signed and notarized original copies of each Application for Payment to the Construction Manager by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application in acceptable manner discussed with Construction Manager and Architect.
- I. Certified Payrolls: With each Application for Payment, submit certified payrolls from the Prime Contractor's own forces and subcontractors for the construction period covered by the previous application.
- J. All substantiating data and attachments required by the Contract Documents shall accompany each Application for Payment upon submission in the form required by the Construction Manager and Architect.
- K. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
 - 5. An Affidavit of Payments to Subcontractors and Suppliers on a form approved by Architect.
 - a. Forms are for previous month's application and are to be submitted with every application through and including the latest pay period prior to the date of submittal of the application.
 - 6. When the Construction Manager and/or Architect require additional substantiating data, Prime Contractor shall promptly submit suitable information with a cover letter.
- L. Monthly Application for Payment: Administrative actions and submittals for each monthly application for payment include the following:
 - 1. Change Orders: Submit only fully executed, including signatures by all parties, documenting approval.
- M. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
 - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- N. Final Payment Application: Submit final Application for Payment with executed releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
- O. Full and Final Payment will not be made until the following have been supplied, approved and accepted by the Construction Manager, the Owner and the Architect.
1. The required number of copies of all written guarantees, warranties, bonds, operating and maintenance manuals, and test results.
 2. Documentation that all verbal and written instructions and training sessions required by the Contract has been completed.
 3. The required number of copies of all Project Record Documents ("as-built" drawings) has been received.
 4. All materials and equipment required as stock is delivered.
 5. Any other requirement of the Contract Documents which remains outstanding.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

3.1 END OF SECTION 012900

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SECTION 012973 - - SCHEDULE OF VALUES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the Schedule of Values.
- B. Provide summary for all scheduled values as approved by the Construction Manager and Architect.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 FORMS

- A. Use the following form:
 - 1. Schedule of Values: Provide an AIA Document G703 – Continuation Sheet, 1992 edition.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 SCHEDULE OF VALUES

- A. Coordination: Each Prime Contract shall coordinate preparation of its Schedule of Values for its portion of the Construction Schedule and the Work.
 - 1. Correlate line items in the Schedule of Value with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Material/Equipment status report.

d. Contractor's Construction Schedule.

- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Section under Division 01, including, but not limited to, those indicated within Prime Contract scope under Division 01 Section 011250 "Summary of Work."
1. Include and complete all header information on the Schedule of Values forms.
 2. Provide a breakdown of the Contract Sum in enough detail and as follows to facilitate continued evaluation of Applications for Payment and progress reports. Provide several line items for principal subcontract amounts, where appropriate and as indicated.
 3. Provide breakdowns for each phase of construction, addition and building.
 4. Provide itemized Schedule of Value line items for Renovation work and New Construction. Assign these scope items to the specific SED project number(s).
 - a. Schedule a separate line item in the Schedule of Values for each part of the work related to General Requirements as follows:
 - 1) Performance and Payment Bonds.
 - 2) Project Insurance.
 - 3) Mobilization & Demobilization.
 - 4) Field supervision and layout.
 - 5) Temporary facilities.
 - 6) Submittals: Schedule 2% of total Contract amount for line item.
 - 7) Meeting Attendance: Schedule 1% of total Contract amount for line item.
 - 8) Project Closeout: 1% of total contract amount for line item.
 - 9) Record Drawings and Construction Progress Documentation.
 - 10) Punch list: Schedule 1.5% of total Contract amount for line item.
 - 11) Clean-up: Schedule 1% of total Contract amount for line item.
 - 12) Testing or Balancing (if applicable)
 - 13) System Commissioning (if applicable)
 - 14) Allowances: Provide a separate line item for each Allowance (if applicable)
 - 15) Alternates: Provide a separate line item for each Alternate (if applicable)
 - 16) Unit Prices: Itemize each unit price for the Prime Contract (if applicable)
 - 17) Change Orders: On separate G703 sheet, add each Change Order for the Prime Contract, as cumulatively issued/approved through duration of project.
 - b. Itemize separate line item cost for work required by each basic activity or operation by specification Section numbers.

- 1) Take each line item cost and breakout into separate labor and material for work required by each basic activity or operation by specification Section numbers.
 5. For each line of work in the Schedule of Values to be performed by a subcontractor to the Prime Contractor, the line shall clearly identify the legal name of the subcontractor performing the work. All subcontractors shall be identified prior to the approval of the Schedule of Values.
 6. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - a. Show total costs including overhead and profit.
 - b. Percentage of total Contract Sum adjusted to equal 100 percent.
 7. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include progress payments for materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing.
 8. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 9. Provide additional separate line items for Specification Sections that have construction that can be identified as a separate system, like structural steel, that will have separate lines items for;
 - a. Anchor Bolts.
 - b. Columns & Beams.
 10. After review by the Architect, revise and resubmit Schedule of Values if required by the Architect as many times as required until approval by the Architect is received.
- C. Schedule of Value Times:
1. Within ten (10) days of Notice to Proceed, submit to the Construction Manager and Architect, a fully outlined draft Schedule of Values on AIA Docs. G702 and G703.
 2. Based on the Construction Manager and Architect's approvals, revise and resubmit the final approved Schedule of Values on AIA Docs. G702 and G703 at least ten (10) days prior to the first application for payment.
 3. First Application for Payment will not be approved until the Construction Manager and Architect approves Schedule of Value format.
 4. Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

END OF SECTION 012973

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SECTION 013100 - – PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
 - 4. Requests for Interpretation (RFIs.)
 - 5. Special Reports.
 - 6. General Coordination Provision.
- B. Each Prime Contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific Prime Contractor.

1.3 DEFINITIONS

- A. RFI: Request from Prime Contractor seeking interpretation or clarification of the Contract Documents.
- B. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.
 - 1. Coordination Drawings may include components previously shown in detail on Shop Drawings or Product Data.

1.4 COORDINATION

- A. Coordination: Each Prime Contractor shall coordinate its construction operations with those of other Prime Contractors and entities to ensure efficient and orderly installation of each part of the Work. Each Prime Contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Project meeting attendance shall facilitate open communications.

2. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 3. Coordinate installation of different components with other Prime Contractors to ensure maximum accessibility for required maintenance, service, and repair.
 4. Make adequate provisions to accommodate items scheduled for later installation.
 5. Where availability of space is limited, each Prime Contractor shall coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate Prime Contractors if coordination of their Work is required.
- C. Administrative Procedures: Each Prime Contractor shall coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other Prime contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Prime Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Pre-installation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
 9. Processing of coordination drawings.
 10. Daily cleaning and protection.
- D. Conservation: Each Prime Contractor shall coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Provide for material and waste recycling methods.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.
- 1.5 SPECIAL REPORTS
- A. General: Submit special reports to Owner within one day of an occurrence. Submit a copy of report to Construction Manager and Architect and other entities affected by the occurrence.

- B. Reporting Unusual Events: When an event of an unusual or significant nature occurs at Site, Prime Contractor shall prepare and submit a special report. The report shall list data, observations of chain of events, persons affected, and participating response by Prime Contractor's personnel and similar pertinent information.
 - 1. Advise the Owner in advance when such events are known or predictable.

1.6 COORDINATION DRAWINGS

- A. General: To identify and resolve trade conflicts and interference prior to construction work, all contractors shall provide Coordination Models and Drawings using a single 3D modeling software system (BIM).
- B. Coordination Drawing Process
 - 1. The Mechanical Contractor is required to submit electronic sheet metal shop drawings (3/8" scale). The background of these drawings will include partition lay-outs, doors including swings, structural steel columns and beams above (including bottom elevations from finished floor below), ceiling grid, diffusers-grilles-registers, bottom of duct elevations AFF and light fixtures, for use in coordinating with other trades work. Other conflicting trades such as plumbing, electrical, etc., will overlay and place their lines including elevations on the electronic coordination drawings. When conflicts arise, they are to be brought to the attention of CM so that a resolution with the conflicting trade can be reached.
NOTE: A color code will be established for each trade. Once coordination is complete, Mechanical Contractor will issue an electronic copy to all parties for record and one (1) full size hard copy to CM. Timing of this coordination work is essential to the progress work; therefore, contractors will have a maximum of fourteen (14) days to complete their portion of the drawings.
 - 2. Sequence as to how drawings are to be marked up is (i.e. flow) General Contractor to Mechanical Contractor to Fire Protection Contractor to Plumbing Contractor to Electrical Contractor back to Mechanical Contractor. Mechanical Contractor to submit completed coordination drawings to A/E for review and approval. CM is to be copied on all correspondence.
 - 3. The Mechanical Contractor is responsible for management of the coordination drawing process (gatekeeper).
 - 4. The coordination drawing(s) shall accurately locate and dimension, including but not limited to the following.
 - a. Grid layout as per architectural drawings and verified by associated installation contractors (Mechanical Contractor).
 - b. Light fixtures, transformers, main feeder conduit and racks for electrical and telephone, pull boxes – location, including pendant fixtures, top of fixture elevation and type including size (LxWxH) (Electrical Contractor).
 - c. Grilles and Diffusers – Location, size and type, and top of take-off box elevation (Mechanical Contractor).

- d. Access Panels – Location and type (Each Prime Contractor).
 - e. Mechanical equipment, piping, valves, heater units, pumps, etc. (Mechanical Contractor).
 - f. Gypsum Board Suspension Systems must be included in the coordination drawing process. Refer to Specification 011200 for additional information.
5. Once complete, an overall meeting with all participants present will be held to review and resolve conflicts. At this meeting, Each Prime Contractor is to have their engineer and draftsman present including any relevant subcontracts so all conflicts can and will be resolved. If the individual contractors cannot resolve a conflict, the decision by E.O.R will be final and binding. At the end of the meeting Each Prime Contractor including subcontractors will sign and date each drawing with the revisions noted. The Architects and Engineers may be at this meeting.
- a. Final coordination drawings will be distributed by the Mechanical Contractor to all parties including the Architect and Engineer. The CM to be provided one printed set. All work to be installed as intended by the coordination drawings. Work not so installed is subject to replacement if conflicts occur and at no additional cost to the Owner and Construction Manager.
 - b. Construction work shall not begin until the coordination drawings for that area of the building have been completed and signed off by all contractors.
 - c. Coordination Models and Drawings are intended for use by the respective trades during construction work and shall not be construed as replacing either the shop drawings specified in the technical specifications or the Record Drawings required.

1.7 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
 1. Include special personnel required for coordination of operations with other Prime Contractors.
- B. Supervision: Each Prime Contractor's project manager and field superintendent throughout project duration shall have five years experience minimum in the proposed position.
 1. Two years minimum of the five years experience for position shall be with Prime Contractor's firm.
 2. Asbestos Abatement: Additionally, field superintendent shall meet requirements of OSHA 1926.1101 "Competent Person," have one year of on-the-job training minimum, and hold certification as an Asbestos Project Supervisor.
- C. Should the project managers or superintendents prove unqualified for the position at any point in the project, the Construction Manager shall issue a letter stating that the person is to be removed from involvement in the project.

1. Action must be made by Prime Contractor within seven working days of receipt of such letter.
- D. Staff Names: At Preconstruction Conference each Prime Contractor shall submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities. List businesses addresses and telephone numbers, including business office, field office, cellular, and facsimile.
 1. Post copies in Project meeting room, each temporary field office and at each temporary telephone.
- E. Provide corresponding identification badge number for each staff listed.

1.8 PROJECT MEETINGS

- A. General: Architect and Construction Manager shall schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner, Construction Manager and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Construction Manager will conduct the meeting to review responsibilities and personnel assignments.
 1. Attendees: Authorized representatives of Owner, Construction Manager, Architect, and their consultants; each Prime Contractor and its superintendent; major subcontractors; manufacturer's suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Introduction and sign in of attendees.
 - b. Each Prime Contractor shall submit the:
 - 1) Tentative construction schedule.
 - 2) Staff names.
 - 3) Preliminary submittal schedule.

- 4) Labor rate sheets; provide for each trade classification of Prime Contract workforce on form per Division 00 Section, "Project Forms."
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Architect to provide overview of projected construction milestone schedule, phasing requirements and schedules.
 - l. Labor Wage Rates
 - m. Preparation of Record Documents.
 - n. Use of the premises and existing building.
 - o. Work restrictions.
 - p. Identification badges.
 - q. Daily Cleaning Procedures.
 - r. Owner's occupancy requirements.
 - s. Responsibility for temporary facilities and controls.
 - t. Construction waste management and recycling.
 - u. Parking availability.
 - v. Field office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. First aid.
 - y. Security.
 - z. Progress cleaning.
 - aa. Working hours.
 - bb. Telephone use.
3. Minutes: Construction Manager will record and distribute meeting minutes.
- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
 1. Attendees: Prime Contractor, Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, Construction Manager of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. The Contract Documents.
 - b. Options.

- c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.
 - k. Conformance with Project Master Schedule.
 - l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - n. Warranty requirements and manufacturer's inspection notification.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
3. Construction Manager to record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Architect shall initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at biweekly intervals. Coordinate dates of meetings with preparation of payment requests. Meetings will be held weekly, as determined by the Construction Manager if, construction sequencing is critical or if construction fall behind schedule.
1. Attendees: In addition to representatives of Owner, Construction Manager and Architect, each Prime Contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Project Master Schedules: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Project Master Schedules. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - a) Construction Schedule Updating: Prime Contractors to revise construction schedule after each meeting when revisions have been recognized or made. Forward the updated construction schedule to Architect and Construction Manager within 2 working days of the progress meeting.
 - 1 Conflicts: Each Prime Contractor is to review the approved schedules of other Prime Contractors and attempt to resolve together, any conflicts.
 - 2 Delay of Work Claims: Document in updated construction schedules overdue milestone or event dates due to other Prime Contractors non-compliance with Project Master Schedules.
 - 3 Reporting: Provide in writing any unresolved conflicts with other Prime Contractors that may affect or delay overall project goals within 24 hours of occurrence to Architect.
 - b. Review present and future needs of each entity present, including the following:
 - a) Architect
 - b) Identify present problems and necessary resolutions.
 - c) Status of submittals.
 - d) Field observations.
 - e) RFIs.
 - f) Status of proposal requests.
 - g) Pending changes.
 - h) Status of Change Orders.
 - i) Pending claims and disputes.
 - j) Documentation of information for payment requests.
 - k) Construction Manager
 - l) Deliveries.
 - m) Access.
 - n) Site utilization.
 - o) Temporary facilities and controls.

- p) Work hours.
 - q) Progress cleaning.
 - r) Quality and work standards.
 - s) Prime Contractor
 - t) Interface requirements and compatible product issues of products and construction methods within place products of other Prime Contractors.
 - u) Sequence of operations.
 - v) Status of submittals.
 - w) Off-site fabrication.
 - x) Temporary facilities and controls.
 - y) Hazards and risks.
 - z) Status of correction of deficient items.
- 3. Minutes: Construction Manager will Record the meeting minutes.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Project Master Schedules to be updated at the discretion of the Architect and Construction Manager.
- E. Coordination Meetings: General Construction Prime Contractors shall conduct Project coordination meetings at weekly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
- 1. Attendees: In addition to representatives of Owner, Construction Manager and Architect, each Prime Contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Project Master Schedules: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to Project Master Schedules. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Schedule Updating: Revise Project Master Schedules after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.

- c. Review present and future needs of each Prime Contractor present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.
3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.9 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
 1. RFIs shall originate with the Prime Contractor. RFIs submitted by entities other than Prime Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Prime Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following on this projects form:
 1. Project name.
 2. Date.
 3. Name of Prime Contractor.
 4. Name of Architect.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Prime Contractor's suggested solution(s). If Prime Contractor's solution(s) impact the Contract Time or the Contract Sum, Prime Contractor shall state impact in the RFI.
 10. Prime Contractor's signature.

11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Prime Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: 000832-1.
 1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with the same content and layout as indicated above.
 1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
 1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Prime Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Prime Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Construction Manager in writing within 10 days of receipt of the RFI response.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Prime Contractor disagrees with response.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require Installer of each major component to inspect both substrate and conditions under which Work is to be performed. Correct unsatisfactory conditions prior to proceeding.
- B. Coordinate temporary enclosures with required inspection and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
 - 2. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 3. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Acceptance of Conditions: Prime Contractor shall examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations and submit to Construction Manager and Architect.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Date of examination.
 - b. Description of the Work.
 - c. List of detrimental conditions, including substrates.
 - d. List of unacceptable installation tolerances.
 - 1) Verify Specification Section for responsibility of corrective measures.
 - e. Recommended correction of those not part of Work as detailed in Specification Section.
 - 2. Verify compatibility with and suitable of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual location of connection before equipment and fixture installation.

3.3 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with Construction Manager, Architect and authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Construction Manager in advance of proposed utility interruptions.
 - a. Submit shutdown request form to Construction Manager for written permission and authorization.
 - 2. Do not proceed with utility interruptions without written permission and authorization.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Prime Contractor to verify fabrication schedule coincides with Construction Manager and Architect's construction schedule to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Construction Manager and Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.4 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to layout the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, immediately notify Construction Manager and Architect.
- B. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- C. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey part member and types of instruments and tapes used. Make the log available for reference by Construction Manager and Architect.

END OF SECTION 013100

END OF SECTION

SECTION 013150 - - SAFETY AND HEALTH

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 PROJECT SITE SAFETY

- A. The Prime Contractor, not the Architect or Construction Manager or Owner, is responsible for Project site safety.

1.3 SAFETY AND HEALTH REGULATIONS

- A. The Prime Contractor, and any entity working for the Prime Contractor, shall comply with the U.S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-54), latest revisions and with the latest requirements of the "Right to Know" Laws and the New York State Labor Law.
- B. In order to protect the general public and the lives and health of his/her employees under the Contract, the Prime Contractor shall comply with all pertinent provisions of the latest issues of the Federal Register, Bureau of Labor Standards, Safety and Health Regulations; New York State Industrial Code Rule 30 pertaining to Tunneling Operations; New York State Industrial Code Rule 23 pertaining to Trenching Operations; and the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work under this Contract. In case of a conflict between the above noted authorities, the most stringent shall prevail.
- C. The Prime Contractor shall have on the project site at all times, while work is in progress, at least one person skilled in safety and health procedures and familiar with State and Federal safety and health regulations whose responsibility shall be to observe methods and procedures. He shall have the duty and authority to stop and correct all unsafe and unhealthy conditions.
- D. Toxic, noxious or otherwise hazardous fumes, gases or dusts, etc. from welding, cadwelding, painting, grinding, sawing, sweeping or any other operations shall be kept to the absolute minimum and shall be vented directly to the outside by the Contractor, and only used when authorized by the Architect.

- E. The Prime Contractor to submit to the Architect, prior to first payment application approval, 2 copies of Material Safety and Data Sheets (MSDS) for all material used on site. The Prime Contractor shall also keep one (1) complete set of Material Safety and Data Sheets (MSDS) onsite at all times.
 - 1. These reference materials shall be updated continuously throughout the Project, as additional materials are added to/brought to the Project site.

1.4 SAFETY AND FIRST AID

- A. The Prime Contractor shall at all times exercise caution of his/her operations and shall be responsible for the safety and protection of all persons on or about the site arising out of or relating to his/her Work. All hazards shall be avoided or guarded in accordance with the provisions of the Manual of Accident Prevention in Construction of the AGCA, unless such provisions contravene local law. The safety provisions of all applicable laws, codes and ordinances shall be observed.
- B. The Prime Contractor shall provide and maintain at the Site, at each location where work is in progress, as part of his/her plant, an approved first aid kit. Ready access thereto shall be provided at all times when persons are employed on the work site.
- C. The Prime Contractor shall take due precautions against infectious diseases, and shall arrange for the immediate isolation and removal from the Site of any employee who becomes ill or is injured while engaged on the work site.
- D. The Prime Contractor shall, upon request of the Architect, immediately correct all conditions that constitute a clear and present danger to persons as interpreted by the Architect. If such danger is not so corrected, the Owner or the Architect will employ other persons to do such work and the expense thereof shall be deducted from any monies due or to become due to the Prime Contractor.
- E. Clean up of the Prime Contractor's, and/or their subcontractor's, materials and/or debris shall be deemed a safety & health issue.

1.5 ACCIDENTS AND ACCIDENT REPORTS

- A. Notify Architect immediately of any accidents involving Prime Contractor, subcontractor or supplier personnel on site.
- B. Within 24 hours of the occurrence, the Prime Contractor shall submit a written accident report, to the Architect, fully detailing the occurrence.

1.6 TOOL BOX SAFETY MEETINGS

- A. The Prime Contractor shall hold weekly toolbox safety meetings with his/her own workers. Records of these meetings shall be forwarded to the Owner, through the Construction Manager's office, each week.
 - 1. Failure to comply with this requirement shall result in Applications for Payment not being reviewed and processed.

END OF SECTION 013150

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SECTION 013200 - - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 1. Preliminary Construction Schedule.
 2. Contractor's Construction Schedule.
 3. Submittal Schedule.
 4. Daily Construction Reports.
 5. Material/Equipment Status Reports.
 6. Field Condition Reports.
 7. Special Reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 2. Predecessor Activity: An activity that precedes another activity in the network.
 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Construction Manager and Architect.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Major Area: A story of construction, a separate building, or a similar significant construction element.
- G. Milestone: A key or critical point in time for reference or measurement.
- H. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.
- I. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

- A. Qualification Data: For scheduling consultant.
- B. Submittals Schedule: Submit 4 copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational.)
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Construction Manager and Architect's Construction Site Coordinator's final release or approval.
- C. Preliminary Construction Schedule: Submit three opaque copies.
1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.
- D. Contractor's Construction Schedule: Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.
- E. Daily Construction Reports: Submit one copy at no less than weekly intervals.
- F. Material/Equipment Status Reports: Submit two copies at bi-weekly intervals.

- G. Field Condition Reports: Submit two copies at time of discovery of differing conditions.
- H. Special Reports: Submit two copies at time of unusual event.

1.5 QUALITY ASSURANCE

- A. Pre-scheduling Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to the Preliminary Construction Schedule and Contractor's Construction Schedule, including, but not limited to, the following:
 - 1. Review software limitations and content and format for reports.
 - 2. Verify availability of qualified personnel needed to develop and update schedule.
 - 3. Discuss constraints, including phasing work stages area separations interim milestones and partial Owner occupancy.
 - 4. Review delivery dates for Owner-furnished products.
 - 5. Review schedule for work of Owner's separate contracts.
 - 6. Review time required for review of submittals and resubmittals.
 - 7. Review requirements for tests and inspections by independent testing and inspecting agencies.
 - 8. Review time required for completion and startup procedures.
 - 9. Review and finalize list of construction activities to be included in schedule.
 - 10. Review submittal requirements and procedures.
 - 11. Review procedures for updating schedule.

1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, re-submittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for the Notice of Award to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 30 days, unless specifically allowed by Construction Manager and Architect.
 - 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 3. Submittal Review Time: Include review and re-submittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 - 4. Startup and Testing Time: Include not less than 10 days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's and Construction Site Coordinator's administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work under More Than One Contract: Include a separate activity for each contract.
3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
6. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Startup and placement into final use and operation.
8. Area Separations: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Permanent space enclosure.
 - c. Completion of mechanical installation.
 - d. Completion of electrical installation.

e. Substantial Completion.

- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion. Include milestones relevant to the work of other contracts where these impact the work of the Contractor due to location, time, or interaction with other contracts.
- F. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.
 - 1. Refer to Division 01 Section "Payment Procedures" for cost reporting and payment procedures.
 - 2. Contractor shall assign cost to construction activities on the Construction Schedule. Costs shall not be assigned to submittal activities unless specified otherwise but may, with Architect's approval, be assigned to fabrication and delivery activities. Costs shall be under required principal subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training (if applicable), in the amount of 5 percent of the Contract Sum.
 - 3. Each activity cost shall reflect an accurate value subject to approval by Construction Manager and Architect.
 - 4. Total cost assigned to activities shall equal the total Contract Sum.
- G. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.
- H. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.
 - 1. Microsoft Project for Windows 7 or newer operating system.

2.3 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within seven days of date established for the Notice of Award.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for the Notice of Award. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require 3 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.5 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (refer to special reports.)
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Meter readings and similar recordings.
 - 12. Emergency procedures.
 - 13. Orders and requests of authorities having jurisdiction.
 - 14. Change Orders received and implemented.
 - 15. Construction Change Directives received and implemented.
 - 16. Services connected and disconnected.
 - 17. Equipment or system tests and startups.
 - 18. Partial Completions and occupancies.
 - 19. Substantial Completions authorized.
- B. Material Location Reports: At bi-weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.

- C. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation (on CSI Form 13.2A.) Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.6 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating and response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At bi-weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Construction Site Coordinator, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

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SECTION 013233 - – PHOTOGRAPHIC DOCUMENTATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Preconstruction photographs/videos.
 - a. Contractor shall photograph/video all existing condition related to their work areas prior to commencement of any work per the requirements of the AIA A232 - 2019 General Conditions of the Contract for Construction, paragraph 3.3.13. These photos/videos shall be submitted electronically to the Architect and CM and shall serve as the basis for any future claims based on existing conditions.

1.3 SUBMITTALS

- A. Qualification Data: For photographer/videographer.
- B. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph/video. Indicate elevation or story of construction. Include same label information as corresponding set of photographs.
- C. Construction Photographs: Submit two prints of each photographic view within seven days of taking photographs.
 - 1. Format: 8 by 10 inch smooth-surface matte prints on single-weight commercial-grade photographic paper, punched for standard 3-ring binder.
 - 2. Identification: On back of each print, provide an applied label or rubber-stamped impression with the following information:
 - a. Name of Project.
 - b. Name and address of photographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date photograph was taken if not date stamped by camera.
 - f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

- g. Unique sequential identifier.
- 3. Digital Images: Submit a complete set of digital image electronic files with each submittal of prints on USB. Identify electronic media with date photographs were taken. Submit images that have same aspect ratio as the sensor, uncropped.

1.4 QUALITY ASSURANCE

- A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

1.5 COORDINATION

- A. Auxiliary Services: Cooperate with photographer and provide auxiliary services requested; including access to Project site and use of temporary facilities, including temporary lighting required to produce clear, well-lit photographs without obscuring shadows.

1.6 USAGE RIGHTS

- A. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

PART 2 PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 4.0 megapixels, and at an image resolution of not less than 1024 by 768 pixels.

PART 3 EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

- A. Preconstruction Photographs: Before commencement of demolition, take, digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.
 - 1. Flag excavation areas before taking construction photographs.
 - 2. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
- B. Photographer: Engage a qualified commercial photographer to take construction photographs.

- C. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
 - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.

- D. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 1. Photo documentation shall be submitted on the first calendar business day of each month.
 - 2. Date and Time: Include date and time in filename for each image.
 - 3. Field Office Images: Maintain one (1) set of images on USB in the field office at Project site, available always for reference. Identify images same as for those submitted to Architect.

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SECTION 013300 - – SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
 - 1. The submittal process will be administered through an online web service provided through www.submittalexchange.com. This service is provided at no charge to the contractor. Each contractor will require internet access. Web based training will be provided by Submittal Exchange at no cost.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

PART 2 PRODUCTS

2.1 SUBMITTAL SCHEDULE

- A. List of submittals: The Architect will establish the list of submittals required on the Submittal Exchange website for this Project.
- B. Submittal Schedule: Each Contractor shall input the date that each submittal will be received by the Architect on the Submittal Exchange website established for this Project. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first thirty (30) days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - b. Final Submittal Schedule must be approved by the Architect before the second Application for Payment will be approved.
 - 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.
 - 5. The submittal schedule will be available to be viewed on the Submittal Exchange website by all Project team members.
 - 6. The submittal schedule shall indicate that all action submittals are to be sent to the Architect within sixty (60) days after the execution of the Owner/Contractor Agreement.
 - a. If a submittal cannot be sent to the Architect within the specified time period, then the Contractor shall provide an explanation for the additional time.

2.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.
- B. Electronic Submittal Requirement: All action and informational submittals shall be submitted as PDF formatted files through Submittal Exchange.
 - 1. Use the submittal number assigned by the Architect or Construction Manager through Submittal Exchange.
 - 2. All submittals will be returned to the prime contractors electronically through Submittal Exchange. No printed copies will be provided by the Architect to the contractors.
 - 3. Internet Service and Equipment Requirements:
 - a. Email address and Internet access at Contractor's main office.
 - b. Adobe Acrobat (www.adobe.com), Bluebeam PDF Revu (www.bluebeam.com), or other similar PDF review software for applying electronic stamps and comments.
- C. Submittal package: Assemble each submittal and re-submittal individually and appropriately for transmittal and handling.
 - 1. Provide a completed "Submittal Cover" form with each submittal. This form may be found in Section 008300 – "Project Forms." The Submittal Cover shall be the first page of every submittal.
 - a. Every submittal shall be accompanied by a fully executed copy of the Submittal Cover sheet. Ensure the following information for each submittal is completed on each submittal form:
 - 1) Contract number.
 - 2) Contract for: i.e. General Construction Contract.
 - 3) Contractors' name.
 - 4) Sub-contractor and suppliers' name.
 - 5) Submission number and the date for each initial submittal and re-submittal.
 - 6) Shop drawings name and number.
 - 7) Contents.
 - 8) Name of manufacturer.
 - 9) Specification section paragraph number(s) showing product being submitted on.
 - 10) Signature of contractor indicating approval of the submittal with date of approval and all applicable check boxes marked.
- D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- E. Processing Time: Allow time for submittal review, including time for re-submittals, as follows. Time for review shall commence upon Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
1. It is the Contractor's responsibility to provide required submittals complete with enough information to show conformance with the construction documents in a time frame that will not affect the construction schedule. The construction schedule will not be extended due to the Architects' "RETURNED WITHOUT ACTION", "REJECTED" or "REVISE AND RESUBMIT" action on a submittal when the submittal is found to be lacking adequate information showing conformance with the contract documents and/or does not conform to the contract document requirements.
 2. The Architect will review a maximum of two submittals for any single item requiring a submission at no cost to the Contractor. Upon request by the Architect, the Contractor will compensate the Owner, via back charge for all further submissions to the Architect and/or Owner due to submissions that do not provide enough data to prove compliance with the specifications, or that in the opinion of the Architect do not meet the project specifications. Compensation will be computed by the additional hours needed to perform the review and correspondence multiplied by the Architect's normal billing rate.
 3. Initial Review: Allow ten (10) working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 4. Re-submittal Review: Allow seven (7) working days for review of each re-submittal.
- F. Options: Identify options requiring selection by Architect.

- G. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- H. Re-submittals: Make re-submittals in same form and number of copies as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp that indicates "NO EXCEPTION TAKEN", or "MAKE CORRECTIONS NOTED."
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Retain complete printed copies of all approved action submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.
- K. Inspection of Documents: Construction progress drawings (as-builts), approved submittals, updated construction schedule.

PART 3 EXECUTION

3.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Post electronic submittals as PDF electronic files directly to Project Web site at www.submittalexchange.com specifically established for Project.
 - a. After their review, the Architect will post the annotated file to the Project's website. The Contractor will then be notified via e-mail that the submittal has been reviewed and may download the submittal file.
 - b. The Contractor is responsible for printing hard copies of electronic submittals for their own use.
 - 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

- a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. Clearly mark each copy of each submittal in bold marking of contrasting color to show which products and options are applicable.
 2. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 3. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 4. Submit Product Data before or concurrent with Samples.
 5. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm.)

3. Submit Shop Drawings in the following format:
 - a. PDF electronic file.

- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - a. Transmit samples via hand delivery, courier, or mail service to the Architect's Office.
 - b. Forward a copy of the transmittal to the Construction Manager.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Project name and site name, if Project involves multiple site locations.
 - b. Submittal number assigned per submittal schedule.
 - c. Generic description of Sample.
 - d. Product name and name of manufacturer.
 - e. Sample source.
 - f. Number and title of applicable Specification Section.
 - g. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, also provide corresponding electronic submittal of the completed Submittal Cover, a digital image file illustrating the Sample's characteristics, and identification information for record.
 - a. Transmit printed copies of the above along with the physical Sample in the same quantity as required for the Samples.
 4. Disposition: Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit three (3) full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, through Construction Manager, will return one (1) submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit minimum four (4) sets of Samples. Architect and Construction Manager will retain three (3) Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in the General Conditions of the Contract.
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.

- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Y. Construction Photographs: Comply with requirements specified in Division 01 Section "Photographic Documentation."
- Z. Material Safety Data Sheets (MSDSs): Contractor shall provide and maintain a hard copy of all MSDS sheets at each Project Site as per OSHA requirements. Do not submit MSDS sheets to the Architect or Construction Manager.

3.2 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three (3) paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

3.3 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.4 ARCHITECT'S ACTION

- A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action as follows:
 - 1. No Exception Taken – Submittal is approved and released for fabrication and can be incorporated into the work.
 - 2. Make Corrections Noted - Submittal is approved and released for fabrication and can be incorporated into the work with the modifications as noted.
 - 3. Revise & Resubmit – Submittal is not approved, and resubmission is required per the Architect's comments. Such products cannot be purchased nor incorporated into the work.
 - 4. Rejected – Submittal is not approved, and submission does not meet requirements of the Project. Resubmit products that conform to the Contract Documents.
- B. Informational Submittals: Architect will review each submittal and will not return it or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Submittals not required by the Contract Documents may be returned by the Architect without action.
- E. Submittals that do not follow the protocol that is outlined in the applicable Specification Section, or this Section, of the Project Manual may be returned to the Contractor without action by the Architect.
- F. Submittal packages received from sources other than the Contractor, or other than from the Contractor via the Construction Manager, will be discarded by the Architect.

END OF SECTION

SECTION 014000 - -- QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality assurance and control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality assurance and control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality assurance and control services required by Architect, Owner, Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.
 - a. All Prime Contracts: Verify all Specification Sections for testing requirements in addition to the following:
 - 1) Testing done for the convenience of the Prime Contractor or their Sub-Contractors.
 - 2) Testing related to remedial operations or possible defects.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect or Construction Manager.

- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
 - 2. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
 - 3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.
- D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONSTRUCTION TESTING

- A. Prime Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, each Prime Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. Costs for these services are to be included in the Contract Sum.
1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are Prime Contractor's responsibility, Prime Contractor shall employ and pay a qualified independent testing agency to perform quality-control services.
 2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.
 - a. Where the Owner has engaged a testing agency and Prime Contractor is also required to engage an entity for the same or related element, the Prime Contractor shall not employ the entity engaged by the Owner, unless agreed to in writing by the Owner.
- B. Retesting: Prime Contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Prime Contractor's responsibility.
1. Cost of retesting construction, revised or replaced by Prime Contractor, is Prime Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.
- C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
1. Provide access to the Work.
 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
 3. Ladders.
 4. Provide facilities for storage and curing of test samples.
 5. Delivery of samples to testing laboratories.
 6. Provide design mix documentation.
 7. Provide security and protection of samples and test equipment at the Project Site.

- D. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Construction Manager and Prime Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
 - 1. The agency shall notify the Architect, Construction Manager and Prime Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
 - 3. The agency shall not perform any duties of Prime Contractor.
- E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 - 1. Each Prime Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities through the Construction Manager.

1.5 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 ACTION SUBMITTALS

- A. Shop Drawings: For integrated exterior mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
 - 1. Indicate manufacturer and model number of individual components.
 - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.7 INFORMATIONAL SUBMITTALS

- A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by Architect.
 - 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by Architect.

- B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality control service.

1.8 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency or inspecting agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection methods, citing ASTM reference standard used.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.

13. Recommendations on retesting and reinspecting.

- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement weather conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement weather conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.9 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. Each independent inspection and testing agency engaged shall be authorized by jurisdiction to operate in the state where Project is located.
 - 2. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 3. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
 - 4. Testing agency qualifications must be approved by the Architect prior to proceeding with work.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:

- a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
- K. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, through Construction Manager, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- L. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 - a. Construct mockups complete, including work of all trades required in finished Project.
 2. Notify Architect and Construction Manager seven (7) calendar days in advance of dates and times when mockups will be constructed.
 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at Project.
 4. Demonstrate the proposed range of aesthetic effects and workmanship.
 5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven (7) calendar days for initial review and each re-review of each mockup.
 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 7. Demolish and remove mockups when directed unless otherwise indicated.
- M. Integrated Exterior Mockups: Construct integrated exterior mockup as indicated on Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials.

- N. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Specification Sections in Divisions 02 through 33.

1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. Unless otherwise indicated, provide quality-control services specified.
 - 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 - 3. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspecting will be performed.
 - 4. Where quality control services are indicated as Contractor's responsibility, submit a certified written report, in triplicate, of each quality control service.
 - 5. Contractor shall furnish to the Laboratory such samples of materials as may be necessary for testing purposes.
 - 6. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 7. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency and Special Inspector Responsibilities: Cooperate with Architect, Construction Manager, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect, Construction Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 - 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 - 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 - 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality control service through Contractor.
 - 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 - 6. Do not perform any duties of the Contractor.
 - 7. Submit reports to the Architect, Construction Manager, and Contractor within seven (7) calendar days of the test.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Provide safe access to items to be tested. This includes sheeting and ladders for deep excavation, scaffolding and ladders for inspection and testing of superstructure items. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 2. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 3. Facilities for storage and field curing of test samples.
 - 4. Delivery of samples to testing agencies.
 - 5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 6. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
 1. Distribution: Distribute schedule to Owner, Architect, Construction Manager, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.
 2. Provide and maintain, for the sole use of the Testing Agency, adequate facilities for safe storage and proper curing of concrete test cylinders on the project site for the first 24 hours as required by ASTM C31-69.

1.11 SPECIAL TESTS AND INSPECTIONS

- A. General: Special Inspections and Structural Testing shall be in accordance with Chapter 17 of the Building Code of New York State (BC-NYS.)
- B. Special Tests and Inspections: Owner will engage a qualified special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in Statement of Special Inspections attached to this Section, and as follows:
 1. Verifying that manufacturer maintains detailed fabrication and quality control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect, Construction Manager, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect, through Construction Manager, with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which shall include a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected work.
- C. Qualifications: The Special Inspector shall be a Professional Engineer licensed in the State that the project is located who is acceptable to the Architect and the Authorities Having Jurisdiction (AHJ).
 1. The Testing Agency shall meet all the qualifications stated elsewhere in this Section and shall be approved by the Architect.
 2. Inspectors: Special Inspections shall be performed by inspectors who are either Professional Engineers licensed to practice in the State that the project is located, or Engineers-In-Training (EIT) with an education and background in structural engineering except as indicated below:

- a. Special Inspection of soils and foundations may be conducted by Professional Engineers or EIT's with an education and background in geotechnical engineering.
 - b. Technicians conducting tests of concrete shall be an ACI certified Concrete Field Technician – Grade 1 or higher.
 - c. Personnel conducting inspections of concrete work may be an ACI certified Concrete Construction Inspector or other qualified individuals designated and supervised by the Special Inspector, with experience inspecting concrete work.
 - d. Personnel conducting inspections of other work including but not limited to masonry, wood framing, and steel framing, may be individuals with experience inspecting such work, and designated and supervised by the Special Inspector.
 - e. Technicians conducting tests or inspections of welds shall be AWS Certified Welding Inspectors. Technicians conducting ultrasonic testing shall also be certified as an ASNT-TC Level II or Level III technician.
 - f. Technicians performing standard tests described by specific ASTM Standards shall have training in the performance of such tests and must be able to demonstrate either by oral or written examination competence for the test being conducted. Such Technicians shall not evaluate test results.
 - g. Technicians of Testing/Inspecting Agencies for smoke control shall have experience in fire-protection engineering, mechanical engineering, and shall have certification as air balancers.
3. Submittals: The Special Inspector and Testing/Inspecting Agency shall submit to the Architect for review, a copy of their qualifications which shall include the names and qualifications of each of the individual inspectors and technicians who will be performing same.
 4. Conflicts of Interest: The Special Inspector and Testing/Inspecting Agency shall disclose any past or present business relationship or potential conflict of interest with the Contractors or Sub-contractors whose work will be inspected or tested.
- D. Owner Responsibilities: The Owner will Contract with and pay for the services of the Special Inspector.
1. Contract Documents: The Owner will provide the Special Inspector with a complete set of Contract Documents, sealed by the Architect and approved by the Authorities Having Jurisdiction (AHJ.)
- E. Contractor's Responsibilities for Special Inspections: The Contractor will cooperate with the Special Inspector and their agents so that the Special Inspections and Testing may be performed without hindrance.
1. Notification: The Contractor shall notify the Special Inspector and Testing agency at least forty-eight (48) hours in advance of a required inspection or test as indicated in the Schedule of Special Inspections.

2. Access: The Contractor shall provide incidental labor and facilities to provide safe access for the Special Inspector or their agents to the work to be inspected or tested;
 - a. To obtain and handle samples at the site or at the source of products to be tested,
 - b. To facilitate tests and inspections,
 - c. To storage and curing of test samples on site.
 3. Distant Fabricators: If any material(s) or fabricator(s) that require Special Inspections are fabricated in a plant over 200 miles away from the Project Site and the Special Inspector is required to visit the plant, then the Contractor shall be responsible for reimbursing the Special Inspector for mileage and travel expenses incurred beyond that distance limitation.
 4. Retesting/Reinspection: The Contractor will be responsible for the cost of any retesting or reinspection of work which fails to comply with the requirements of the Contract Documents.
 5. The Contractor shall allow the Special Inspectors or their agent's use of current, updated Construction Documents showing changes to the Work, including but not limited to submittals and shop drawings that have been approved by the Architect.
- F. Limitations of Special Inspector's Authority: The Special Inspector shall not:
1. ...release, revoke, alter, or enlarge on the requirements of the Contract Documents.
 2. ...have control over the Contractor's means and methods of construction.
 3. ...be responsible for construction site safety.
 4. ...have the authority to stop work.
- G. Testing/Inspecting Agency Responsibilities to the Special Inspector: After the work requiring special inspections is complete, each testing/inspecting agency shall provide an "Agent's Final Report of Special Inspections" to the Special Inspector, stating that testing was completed in substantial conformance with the Contract Documents.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.

4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and Construction Manager's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

3.3 FINAL REPORT OF SPECIAL INSPECTIONS

- A. The Final Report of Special Inspections shall be completed by the Special Inspector and submitted to the Architect and Owner prior to issuance of a Certificate of Occupancy.
- B. Use Form 102-2001 published by the Council of American Structural Engineers, or other similar form.
 1. The Final Report of Special Inspections shall state that required inspections have been performed and shall itemize any discrepancies which were not corrected nor resolved.

END OF SECTION 014000

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SECTION 014200 - - REFERENCES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "accepted," "deleted," "permitted," "requested," "required," and "selected" mean, unless otherwise explained, "accepted by the Architect," "directed by the Architect," "permitted by the Architect," "requested by the Architect," "required by the Architect," and "selected by the Architect." However, no such implied meaning will be interpreted to extend the Architect's responsibility into the Contractor's area of construction supervision.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work form of incorporation into the Project, and maintained ready for use. Supply and deliver products requiring additional or supplemental fitting, assembly, fabrication, or incorporation into other elements of the Project directly to the fabricator, installer or manufacturer as required.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, or other designated location ready for unloading, unpacking, storing assembly, installation, application, erection, or other form of incorporation into the Project, and maintained ready for use. Supply and deliver products requiring additional or supplemental fitting, assembly, fabrication or incorporation into other elements of the Project directly to the fabricator, installer or manufacturer as required.

- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations required to properly incorporate work into the project.
- H. "Provide": Furnish and install, complete and ready for the intended use. Note: the lack of a modifier in any technical note is to have the inferred meaning of "provide."
- I. "Project Site": is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project. The extent of Project site is shown on the Drawings and may or may not be identical with the description of the land on which Project is to be built.
- J. "Installer": An installer is Contractor, or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
- K. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- L. The term "replace" means remove designated, damaged, rejected, defective, unacceptable, or nonconforming work from the Project and provide new work meeting the requirements of the Contract Documents in place thereof.
- M. "Include": The words "include," in any form other than inclusive, is non-limiting and is not intended to mean all-inclusive."
- N. The terms "Specifications" and "Project Manual" are interchangeable.
- O. "Custom Color" is a special color that is not available from the manufactures standard colors and will require a once in a lifetime color match as selected by the Architect.
- P. "Standard color" is a minimum of 8 standard colors that the manufacture commonly offers for their product.
- Q. "Match existing" is to match the existing material system including but not limited to: color, texture, size, and edge treatment (including the systems grout/mortar color, texture, size, shape and reveal.)

- R. "Concealed" where used in connection with insulation, painting of piping, piping, conduit, ducts, and accessories shall mean that they are hidden from sight as in trenches, chases, shafts, furred spaces, walls, slabs, or hung ceilings; also where they are not hidden from sight in the following locations: in partly excavated spaces or crawl spaces, or in service tunnels and used solely for repairs or maintenance.
- S. "Exposed" where used in connection with insulation, painting of piping, piping, conduit, ducts, accessories shall mean that they are not "concealed" as defined herein above.
- T. "Piping" includes in addition to pipe, also fittings, valves, hangers, and other accessories that comprise system.
- U. "Below Grade" includes all areas below the finished grade line and below the finished floor, where the finished floor system is supported on earth and gravel systems.
- V. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- W. Salvage: Detach items from existing construction and deliver them to Owner ready for reuse or safely store in a controlled environment and reinstall where indicated.
- X. Reinstall: Prepare for reuse, clean, replace missing or damaged accessories, and reinstall them where indicated.
- Y. Existing: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, salvaged, or removed and reinstalled.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, Telephone Numbers, and Web Sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The)	(703) 358-2960
	www.aluminum.org	
AAADM	American Association of Automatic Door Manufacturers	(216) 241-7333
	www.aadm.com	
AABC	Associated Air Balance Council	(202) 737-0202
	www.aabc.com	
AAMA	American Architectural Manufacturers Association	(847) 303-5664
	www.aamanet.org	
AASHTO	American Association of State Highway and Transportation Officials	(202) 624-5800
	www.transportation.org	
AATCC	American Association of Textile Chemists and Colorists (The)	(919) 549-8141
	www.aatcc.org	
ABAA	Air Barrier Association of America	(866) 956-5888
	www.airbarrier.org	
ABMA	American Bearing Manufacturers Association	(202) 367-1155
	www.abma-dc.org	

ACI	American Concrete Institute www.concrete.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association www.domensino.com/AHA	(847) 934-8800
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300

AISC	American Institute of Steel Construction	(800) 644-2400
	www.aisc.org	(312) 670-2400
AISI	American Iron and Steel Institute	(202) 452-7100
	www.steel.org	
AITC	American Institute of Timber Construction	(303) 792-9559
	www.aitc-glulam.org	
ALCA	Associated Landscape Contractors of America	
	(Now PLANET - Professional Landcare Network)	
ALSC	American Lumber Standard Committee, Incorporated	(301) 972-1700
	www.alsc.org	
AMCA	Air Movement and Control Association International, Inc.	(847) 394-0150
	www.amca.org	
ANSI	American National Standards Institute	(202) 293-8020
	www.ansi.org	
AOSA	Association of Official Seed Analysts, Inc.	(607) 256-3313
	www.aosaseed.com	
APA	Architectural Precast Association	(239) 454-6989
	www.archprecast.org	
APA	APA - The Engineered Wood Association	(253) 565-6600

	www.apawood.org	
APA EWS	APA - The Engineered Wood Association; Engineered Wood Systems (See APA - The Engineered Wood Association)	
API	American Petroleum Institute www.api.org	(202) 682-8000
ARHI	Air-Conditioning, Heating & Refrigeration Institute www.arhinet.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers)	(800) 843-2763 (973) 882-1170

	International) www.asme.org	
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9500
AWCI	AWCI International (Association of the Wall and Ceiling Industry International) www.awci.org	(703) 538-1600
AWCMA	American Window Covering Manufacturers Association (Now WCSC)	
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWPA	American Wood Protection Association www.awpa.com	(205) 733-4077
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware	(212) 297-2122

	Manufacturers Association www.buildershardware.com	
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	Building Industry Consulting Service International www.bicsi.org	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.org	(616) 285-3963
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772
CCC	Carpet Cushion Council www.carpetcushion.org	(610) 527-3880
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462

CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CPA	Composite Panel Association www.pbmdf.com	(866) 426-6767 (703) 724-1128
CPPA	Corrugated Polyethylene Pipe Association (See PPI – Plastics Pipe Institute)	
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	Canadian Standards Association www.csa.ca	(800) 463-6727 (416) 747-4000
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(866) 797-4272 (416) 747-2661
CSI	Cast Stone Institute	(717) 272-3744

	www.caststone.org	
CSI	Construction Specifications Institute (The)	(800) 689-2900
	www.csinet.org	(703) 684-0300
CSSB	Cedar Shake & Shingle Bureau	(604) 820-7700
	www.cedarbureau.org	
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)	(281) 583-4087
	www.cti.org	
DHI	Door and Hardware Institute	(703) 222-2010
	www.dhi.org	
EIA	Electronic Industries Alliance	(703) 907-7500
	www.eia.org	
EIMA	EIFS Industry Members Association	(800) 294-3462
	www.eima.com	
EJCDC	Engineers Joint Contract Documents Committee	
	www.ejcdc.org	
EJMA	Expansion Joint Manufacturers Association, Inc.	(914) 332-0040
	www.ejma.org	
ESD	Electrostatic Discharge Association	(315) 339-6937
	www.esda.org	
FIBA	Federation Internationale de	41 22 545 00 00

	Basketball (The International Basketball Federation) www.fiba.com	
FM Approvals	FM Approvals www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FM Global)	
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridarooft.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council www.fsc.org	49 228 367 66 0
GA	Gypsum Association www.gypsum.org	(301) 277-8686
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
GS	Green Seal	(202) 872-6400

	www.greenseal.org	
GSI	Geosynthetic Institute	(610) 522-8440
	www.geosynthetic-institute.org	
HI	Hydraulic Institute	(888) 786-7744
	www.pumps.org	(973) 267-9700
HI	Hydronics Institute (Now Part of AHRI)	
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
HPVA	Hardwood Plywood & Veneer Association	(703) 435-2900
	www.hpva.org	
HPW	H. P. White Laboratory, Inc.	(410) 838-6550
	www.hpwhite.com	
IAS	International Approval Services (Now CSA International)	
IBF	International Badminton Federation	(603) 9283-7155
	www.internationalbadminton.org	
ICEA	Insulated Cable Engineers Association, Inc.	(770) 830-0369
	www.icea.net	
ICRI	International Concrete Repair Institute, Inc.	(847) 827-0830
	www.icri.org	

IEC	International Electrical Congress www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IEST	Institute of Environmental Sciences and Technology www.iest.org	(847) 981-0100
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
ISO	International Organization for Standardization www.iso.ch	41 22 749 01 11
ISFA	International Surface Fabricators Association www.isfanow.org	(877) 464-7732 (801) 341-7360
ITS	Intertek Testing Service NA	(800) 967-5352

	www.intertek.com	
ITU	International Telecommunication Union www.itu.int/home	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	
LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association, Inc. www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America	(440) 250-9222

	www.marble-institute.com	
MPI	Master Painters Institute	(888) 674-8937
	www.paintinfo.com	(604) 298-7578
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.	(703) 281-6613
	www.mss-hq.com	
NAAMM	National Association of Architectural Metal Manufacturers	(630) 942-6591
	www.naamm.org	
NACE	NACE International	(800) 797-6623
	(National Association of Corrosion Engineers International)	(281) 228-6200
	www.nace.org	
NADCA	National Air Duct Cleaners Association	(202) 737-2926
	www.nadca.com	
NAGWS	National Association for Girls and Women in Sport	(703) 476-3452
	www.aahperd.org/nagws/	
NAIMA	North American Insulation Manufacturers Association	(703) 684-0084
	www.naima.org	
NBGQA	National Building Granite Quarries Association, Inc.	(800) 557-2848
	www.nbgqa.com	

NCAA	National Collegiate Athletic Association (The)	(317) 917-6222
	www.ncaa.org	
NCMA	National Concrete Masonry Association	(703) 713-1900
	www.ncma.org	
NCPI	National Clay Pipe Institute	(262) 248-9094
	www.ncpi.org	
NCTA	National Cable & Telecommunications Association	(202) 222-2300
	www.ncta.com	
NEBB	National Environmental Balancing Bureau	(301) 977-3698
	www.nebb.org	
NECA	National Electrical Contractors Association	(301) 657-3110
	www.necanet.org	
NELMA	Northeastern Lumber Manufacturers' Association	(207) 829-6901
	www.nelma.org	
NEMA	National Electrical Manufacturers Association	(703) 841-3200
	www.nema.org	
NETA	InterNational Electrical Testing Association	(888) 300-6382
	www.netaworld.org	(269) 488-6382
NFHS	National Federation of State High School Associations	(317) 972-6900

	www.nfhs.org	
NFPA	National Fire Protection Association	(800) 344-3555
	www.nfpa.org	(617) 770-3000
NFRC	National Fenestration Rating Council	(301) 589-1776
	www.nfrc.org	
NGA	National Glass Association	(866) 342-5642
	www.glass.org	(703) 442-4890
NHLA	National Hardwood Lumber Association	(800) 933-0318
	www.natlhardwood.org	(901) 377-1818
NLGA	National Lumber Grades Authority	(604) 524-2393
	www.nlga.org	
NOFMA	National Oak Flooring Manufacturers Association (Now NWFA)	
NRCA	National Roofing Contractors Association	(800) 323-9545
	www.nrca.net	(847) 299-9070
NRMCA	National Ready Mixed Concrete Association	(888) 846-7622
	www.nrmca.org	(301) 587-1400
NSF	National Sanitation Foundation International	(800) 673-6275
	www.nsf.org	(734) 769-8010

NSSGA	National Stone, Sand & Gravel Association	(800) 342-1415
	www.nssga.org	(703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The)	(800) 323-9736
	www.ntma.com	(540) 751-0930
NTRMA	National Tile Roofing Manufacturers Association	
	(Now TRI)	
NWFA	National Wood Flooring Association	(800) 422-4556
	www.nwfa.org	(636) 519-9663
NWWDA	National Wood Window and Door Association	
	(Now WDMA)	
OPL	Omega Point Laboratories, Inc.	
	(Now ITS)	
PCI	Precast/Prestressed Concrete Institute	(312) 786-0300
	www.pci.org	
PDCA	Painting & Decorating Contractors of America	(800) 332-7322
	www.pdca.com	(314) 514-7322
PDI	Plumbing & Drainage Institute	(800) 589-8956
	www.pdionline.org	(978) 557-0720
PGI	PVC Geomembrane Institute	(217) 333-3929
	http://pgi-tp.cee.uiuc.edu	

PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America) www.landcarenetwork.org	(800) 395-2522 (703) 736-9666
PTI	Post-Tensioning Institute www.post-tensioning.org	(248) 848-3180
RCSC	Research Council on Structural Connections www.boltcouncil.org	
RFCI	Resilient Floor Covering Institute www.rfci.com	(706) 882-3833
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
SAE	SAE International www.sae.org	(877) 606-7323 (724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(877) 294-5424 (516) 294-5424
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)	

SGCC	Safety Glazing Certification Council	(315) 646-2234
	www.sgcc.org	
SIA	Security Industry Association	(866) 817-8888
	www.siaonline.org	(703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SJI	Steel Joist Institute	(843) 293-1995
	www.steeljoist.org	
SMA	Screen Manufacturers Association	(561) 533-0991
	www.smainfo.org	
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association	(703) 803-2980
	www.smacna.org	
SPFA	Spray Polyurethane Foam Alliance	(800) 523-6154
	(Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)	
	www.sprayfoam.org	
SPIB	Southern Pine Inspection Bureau (The)	(850) 434-2611
	www.spib.org	
SPRI	Single Ply Roofing Industry	(781) 647-7026

	www.spri.org	
SSINA	Specialty Steel Industry of North America	(800) 982-0355
	www.ssina.com	(202) 342-8630
SSPC	SSPC: The Society for Protective Coatings	(877) 281-7772
	www.sspc.org	(412) 281-2331
STI/SPFA	Steel Tank Institute/Steel Plate Fabricators Association	(847) 438-8265
	www.steeltank.com	
SWRI	Sealant, Waterproofing, & Restoration Institute	(816) 472-7974
	www.swrionline.org	
TCA	Tile Council of America, Inc.	(864) 646-8453
	www.tileusa.com	
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance	(703) 907-7700
	www.tiaonline.org	
TMS	The Masonry Society	(303) 939-9700
	www.masonrysociety.org	
TPI	Truss Plate Institute, Inc.	(703) 683-1010
	www.tpinst.org	
TPI	Turfgrass Producers International	(800) 405-8873
	www.turfgrassod.org	(847) 649-5555

TRI	Tile Roofing Institute www.tilerroofing.org	(312) 670-4177
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USGBC	U.S. Green Building Council www.usgbc.org	(800) 795-1747 (202) 742-3792
USITT	United States Institute for Theatre Technology, Inc. www.usitt.org	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WCMA	Window Covering Manufacturers Association (Now WCSC)	
WCSC	Window Covering Safety Council (Formerly: WCMA) www.windowcoverings.org	(800) 506-4636 (212) 297-2100
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA) www.wdma.com	(800) 223-2301 (312) 321-6802

WMMPA	Wood Moulding & Millwork Producers Association	(800) 550-7889
	www.wmmpa.com	(530) 661-9591
WWPA	Western Wood Products Association	(503) 224-3930
	www.wwpa.org	

- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

IAPMO	International Association of Plumbing and Mechanical Officials	(909) 472-4100
	www.iapmo.org	
ICC	International Code Council	(888) 422-7233
	www.iccsafe.org	(703) 931-4533
ICC-ES	ICC Evaluation Service, Inc.	(800) 423-6587
	www.icc-es.org	(562) 699-0543
NEC	National Electric Code	
	www.nec.com	

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers	(202) 761-0011
	www.usace.army.mil	
CPSC	Consumer Product Safety Commission	(800) 638-2772
	www.cpsc.gov	(301) 504-7923

DOC	US Department of Commerce	(202) 482-2000
	www.commerce.gov	
DOD	US Department of Defense	(703) 571-5131
	www.defense.gov	
DOE	US Department of Energy	(202) 586-5000
	www.energy.gov	
EPA	US Environmental Protection Agency	(202) 272-0167
	www.epa.gov	
FAA	Federal Aviation Administration	(866) 835-5322
	www.faa.gov	
FCC	Federal Communications Commission	(888) 225-5322
	www.fcc.gov	
FDA	US Food and Drug Administration	(888) 463-6332
	www.fda.gov	
GSA	US General Services Administration	(800) 488-3111
	www.gsa.gov	
HUD	Department of Housing and Urban Development	(202) 708-1112
	www.hud.gov	
LBL	Lawrence Berkeley	(510) 486-4000

	National Laboratory	
	www.lbl.gov	
NCHRP	National Cooperative Highway Research Program	
	(See TRB)	
NIST	National Institute of Standards and Technology	(301) 975-6478
	www.nist.gov	
OSHA	US Department of Labor; Occupational Safety & Health Administration	(800) 321-6742
	www.osha.gov	(202) 693-1999
PBS	Public Building Service	
	(See GSA)	
PHS	US Department of Health & Human Services; Office of Public Health and Science	(202) 690-7694
	www.hhs.gov/ophs/	
RUS	Rural Utilities Service	(202) 720-9540
	(See USDA)	
SD	US Department of State	(202) 647-4000
	www.state.gov	
TRB	Transportation Research Board	(202) 334-2934
	http://gulliver.trb.org	
USDA	US Department of	(202) 720-2791

	Agriculture	
	www.usda.gov	
USPS	US Postal Service	(800) 275-8777
	www.usps.com	(202) 268-2000

- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA)	(800) 872-2253
	Architectural Barriers Act (ABA)	(202) 272-0080
	Accessibility Guidelines for Buildings and Facilities	
	Available from United States Access Board	
	www.access-board.gov	
CFR	Code of Federal Regulations	(866) 512-1800
	Available from Government Printing Office	(202) 512-1800
	www.gpoaccess.gov/cfr/index.html	
FED-STD	Federal Standard (See FS)	
FS	Federal Specification	(215) 697-2664
	Available from Department of Defense Single Stock Point	
	http://dodssp.daps.dla.mil	
	Available from Defense Standardization Program	
	www.dsp.dla.mil	

	Available from General Services Administration	(202) 619-8925
	www.gsa.gov	
	Available from National Institute of Building Sciences	(202) 289-7800
	www.wbdg.org/ccb	
FTMS	Federal Test Method Standard (See FS)	
UFAS	Uniform Federal Accessibility Standards	(800) 872-2253
	Available from Access Board	(202) 272-0080
	www.access-board.gov	

- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

NYBFU	New York Board of Fire Underwriters	(212) 227-3700
	www.nybfuinstitute.org	1-800-227-2761
NYSDEC	New York State Department of Environmental Conservation	(518) 402-8651
	www.dec.ny.gov	
SPDES	NYSDEC – State Pollution Discharge Elimination System	(518) 402-8109
	http://www.dec.ny.gov/permits/6054.html	
NYSDOL	New York State Department of Labor	(518) 457-9000
	www.labor.state.ny.us	
NYSDOS	New York Department of State	(518) 474-4073
	Division of Code Enforcement and	

	Administration	
	www.dos.state.ny.us	
NYSDOT	New York State Department of Transportation	(518) 457-6195
	www.nysdot.gov	
NYSDOH	New York State Department of Health	
	www.health.state.ny.us	
NYSED	New York State Education Department	(518) 474-3906
	Office of Facilities Planning	
	http://www.emsc.nysed.gov/facplan/	
NYSUFPBC	New York State Uniform Fire Protection and Building Code	
	1. BCNYS – Building Code of New York State	
	2. ECNYS – Energy Conservation Construction Code of New York State	
	3. FCNYS – Fire Code of New York State	
	4. FGNYS – Fuel Gas Code of New York State	
	5. MCNYS – Mechanical Code of New York State	
	6. PCNYS – Plumbing Code of NEW York State	
	7. PMCNYS – Property Maintenance Code of New York State	
	8. RCNYS – Residential Code of New York State	

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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SECTION 014533 - CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Code-required special inspections.
- B. Testing services incidental to special inspections.
- C. Submittals.
- D. Manufacturers' field services.
- E. Fabricators' field services.

1.2 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Submittal procedures.
- B. Section 014000 - Quality Requirements.

1.3 ABBREVIATIONS AND ACRONYMS

- A. AHJ: Authority having jurisdiction.
- B. IAS: International Accreditation Service, Inc.
- C. NIST: National Institute of Standards and Technology.

1.4 DEFINITIONS

- A. Code or Building Code: ICC (IBC)-2018, Edition of the International Building Code and specifically, Chapter 17 - Special Inspections and Tests.
- B. Authority Having Jurisdiction (AHJ): Agency or individual officially empowered to enforce the building, fire and life safety code requirements of the permitting jurisdiction in which the Project is located.
- C. Special Inspection:

1. Special inspections are inspections and testing of materials, installation, fabrication, erection or placement of components and connections mandated by the AHJ that also require special expertise to ensure compliance with the approved Contract Documents and the referenced standards.
2. Special inspections are separate from and independent of tests and inspections conducted by Owner or Contractor for the purposes of quality assurance and contract administration.

1.5 REFERENCE STANDARDS

- A. AISC 360 - Specification for Structural Steel Buildings; 2016.
- B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- C. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.
- D. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2019a.
- E. ASTM C172/C172M - Standard Practice for Sampling Freshly Mixed Concrete; 2017.
- F. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2023.
- G. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2020.
- H. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2021.
- I. ASTM E605/E605M - Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members; 2019 (Reapproved 2023).
- J. ASTM E736/E736M - Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members; 2019 (Reapproved 2023).

- K. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestops; 2019.
- L. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers; 2010a (Reapproved 2015).
- M. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- N. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel; 2018.
- O. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2018.
- P. IAS AC291 - Accreditation Criteria for Special Inspection Agencies; 2017.
- Q. ICC (IBC)-2018 - International Building Code; 2018.
- R. SDI (QA/QC) - Standard for Quality Control and Quality Assurance for Installation of Steel Deck; 2017.
- S. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

1.6 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Special Inspection Agency Qualifications: Prior to the start of work, the Special Inspection Agency is required to:
 - 1. Submit agency name, address, and telephone number, names of full time registered Engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
 - 3. Submit certification that Special Inspection Agency is acceptable to AHJ.
- C. Testing Agency Qualifications: Prior to the start of work, the Testing Agency is required to:

1. Submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
 3. Submit certification that Testing Agency is acceptable to AHJ.
- D. Smoke Control Testing Agency Qualifications: Prior to the start of work, the Testing Agency is required to:
1. Submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 2. Submit documentary evidence that agency has appropriate credentials and documented experience in fire protection engineering, mechanical engineering and HVAC air balancing.
 3. Submit certification that Testing Agency is acceptable to AHJ.
- E. Manufacturer's Qualification Statement: Manufacturer is required to submit documentation of manufacturing capability and quality control procedures. Include documentation of AHJ approval.
- F. Fabricator's Qualification Statement: Fabricator is required to submit documentation of fabrication facilities and methods as well as quality control procedures. Include documentation of AHJ approval.
- G. Special Inspection Reports: After each special inspection, Special Inspector is required to promptly submit at least two copies of report; one to Architect and one to the AHJ.
1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of Special Inspector.

- d. Date and time of special inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of special inspection.
 - h. Date of special inspection.
 - i. Results of special inspection.
 - j. Compliance with Contract Documents.
2. Final Special Inspection Report: Document special inspections and correction of discrepancies prior to the start of the work.
- H. Fabricator Special Inspection Reports: After each special inspection of fabricated items at the Fabricator's facility, Special Inspector is required to promptly submit at least two copies of report; one to Architect and one to AHJ.
1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of Special Inspector.
 - d. Date and time of special inspection.
 - e. Identification of fabricated item and specification section.
 - f. Location in the Project.
 - g. Results of special inspection.
 - h. Verification of fabrication and quality control procedures.
 - i. Compliance with Contract Documents.

- j. Compliance with referenced standard(s).
- I. Test Reports: After each test or inspection, promptly submit at least two copies of report; one to Architect and one to AHJ.
 - 1. 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 specifications section.
 - f. Location in the Project.
 - g. Type of test or inspection.
 - h. Date of test or inspection.
 - i. Results of test or inspection.
 - j. Compliance with Contract Documents.
- J. Certificates: When specified in individual special inspection requirements, Special Inspector shall submit certification by the manufacturer, fabricator, and installation subcontractor to Architect and AHJ, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- K. Manufacturer's Field Reports: Submit reports to Architect and AHJ.
 - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in Contract Documents.
- L. Fabricator's Field Reports: Submit reports to Architect and AHJ.

1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in Contract Documents.

1.7 SPECIAL INSPECTION AGENCY

- A. Owner will employ services of a Special Inspection Agency to perform inspections and associated testing and sampling in accordance with ASTM E329 and required by the building code.
- B. The Special Inspection Agency may employ and pay for services of an independent testing agency to perform testing and sampling associated with special inspections and required by the building code.
- C. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.8 TESTING AND INSPECTION AGENCIES

- A. Owner may employ services of an independent testing agency to perform additional testing and sampling associated with special inspections but not required by the building code.
- B. Employment of agency in no way relieves Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.9 QUALITY ASSURANCE

- A. Special Inspection Agency Qualifications:
 1. Independent firm specializing in performing testing and inspections of the type specified in this section.
- B. Testing Agency Qualifications:
 1. Independent firm specializing in performing testing and inspections of the type specified in this section.
- C. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 SCHEDULE OF SPECIAL INSPECTIONS, GENERAL

- A. Frequency of Special Inspections: Special Inspections are indicated as continuous or periodic.
 - 1. Continuous Special Inspection: Special Inspection Agency is required to be present in the area where the work is being performed and observe the work at all times the work is in progress.
 - 2. Periodic Special Inspection: Special Inspection Agency is required to be present in the area where work is being performed and observe the work part-time or intermittently and at the completion of the work.

3.2 SPECIAL INSPECTIONS FOR STEEL CONSTRUCTION

- A. Special inspections required for this category are as indicated on the drawings.

3.3 SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION

- A. Special inspections required for this category are as indicated on the drawings.

3.4 SPECIAL INSPECTIONS FOR MASONRY CONSTRUCTION

- A. Special inspections required for this category are as indicated on the drawings.
 - 1. Masonry construction when required by the quality assurance program of TMS 402/602.
 - 2. Empirically designed masonry, glass unit masonry and masonry veneer in structures designated as "essential facilities".
 - 3. Engineered masonry in structures classified as "low hazard..." and "substantial hazard to human life in the event of failure".

3.5 SPECIAL INSPECTIONS FOR SOILS

- A. Special inspections required for this category are as indicated on the drawings.

3.6 SPECIAL INSPECTIONS FOR SPRAYED FIRE RESISTANT MATERIALS

- A. Sprayed Fire Resistant Materials, General:

1. Verify compliance of sprayed-fire resistant materials with specific fire-rated assemblies indicated in approved Contract Documents, and with applicable requirements of the building code.
2. Perform special inspections after rough installation of electrical, mechanical, plumbing, automatic fire sprinkler and suspension systems for ceilings.

- B. Physical and visual tests: Verify compliance with fire resistance rating.

1. Condition of substrates; periodic.
2. Thickness of sprayed fire resistant material; periodic.
3. Density of sprayed fire resistant material in pounds per cubic foot; periodic.
4. Bond strength (adhesion and cohesion); periodic.
5. Condition of finished application; periodic.

- C. Structural member surface conditions:

1. Inspect structural member surfaces before application of sprayed fire resistant materials; periodic.
2. Verify preparation of structural member surfaces complies with approved Contract Documents and manufacturer's written instructions; periodic.

- D. Application:

1. Ensure minimum ambient temperature before and after application complies with the manufacturer's written instructions; periodic.

2. Verify area where sprayed fire resistant material is applied is ventilated as required by the manufacturer's written instructions during and after application; periodic.
- E. Thickness: Verify that no more than 10 percent of thickness measurements taken from sprayed fire resistant material are less than thickness required by fire resistance design in approved Contract Documents. In no case shall the thickness of the sprayed fire resistant material be less than the minimum below.
 1. Minimum Allowable Thickness: Tested according to ASTM E605/E605M, periodic.
- F. Density: Verify density of sprayed fire resistant material is no less than density required by the fire resistance design in the approved Contract Documents.
- G. Bond Strength: Verify adhesive and cohesive bond strength of sprayed fire resistant materials is no less than 150 pounds per square foot when in-place samples of the cured material are tested according to ASTM E736/E736M and as described below.

3.7 SPECIAL INSPECTIONS FOR FIRE RESISTANT PENETRATIONS AND JOINTS

- A. Verify penetration firestops in accordance with ASTM E2174.
- B. Verify fire resistant joints in accordance with ASTM E2393.

3.8 SPECIAL INSPECTIONS FOR SMOKE CONTROL

- A. Test smoke control systems as follows:
 1. Record device locations and test system for leakage after erection of ductwork but before starting construction that conceals or blocks access to system.
 2. Test and record pressure difference, flow measurements, detection function and controls after system is complete and before structure is occupied.

3.9 OTHER SPECIAL INSPECTIONS

- A. Provide for special inspection of work that, in the opinion of the AHJ, is unusual in nature.

3.10 SPECIAL INSPECTION AGENCY DUTIES AND RESPONSIBILITIES

- A. Special Inspection Agency shall:
 - 1. Verify samples submitted by Contractor comply with the referenced standards and the approved Contract Documents.
 - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified reference standards.
 - 4. Ascertain compliance of materials and products with requirements of Contract Documents.
 - 5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of work or products.
 - 6. Perform additional tests and inspections required by Architect.
 - 7. Attend preconstruction meetings and progress meetings.
 - 8. Submit reports of all tests or inspections specified.
- B. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- C. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.11 TESTING AGENCY DUTIES AND RESPONSIBILITIES

- A. Testing Agency Duties:
 - 1. Test samples submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.

3. Perform specified sampling and testing of products in accordance with specified standards.
 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of work or products.
 6. Perform additional tests and inspections required by Architect.
 7. Attend preconstruction meetings and progress meetings.
 8. Submit reports of all tests or inspections specified.
- B. Limits on Testing or Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the work.
 3. Agency may not assume any duties of Contractor.
 4. Agency has no authority to stop the work.
- C. On instructions by Architect, perform re-testing required because of non-compliance with specified requirements, using the same agency.
- D. Contractor will pay for re-testing required because of non-compliance with specified requirements.

3.12 CONTRACTOR DUTIES AND RESPONSIBILITIES

- A. Contractor Responsibilities, General:
1. Deliver to agency at designated location, adequate samples of materials for special inspections that require material verification.

2. Cooperate with agency and laboratory personnel; provide access to approved documents at project site, to the work, to manufacturers' facilities, and to fabricators' facilities.
3. Provide incidental labor and facilities:
 - a. To provide access to work to be tested or inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested or inspected.
 - c. To facilitate tests or inspections.
 - d. To provide storage and curing of test samples.
4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing or inspection services.
5. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Retain special inspection records.

3.13 MANUFACTURERS' AND FABRICATORS' FIELD SERVICES

- A. When specified in individual specification sections, require material suppliers, assembly fabricators, or product manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, to test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

END OF SECTION 014533

SECTION 015001 - TEMPORARY FACILITIES & CONTROLS-MULTIPLE PRIME CONTRACTS

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Water service and distribution.
 - 2. Temporary electric power and light.
 - 3. Temporary heat.
 - 4. Ventilation and Humidity Control
 - 5. Telephone service.
 - 6. Sanitary facilities, including drinking water.
 - 7. Storm and sanitary sewer.
- C. Support facilities include, but are not limited to, the following:
 - 1. Field offices and storage containers.
 - 2. Temporary roads and paving.
 - 3. Dewatering facilities and drains.
 - 4. Temporary partitions and enclosures.
 - 5. Hoists and temporary elevator use.
 - 6. Temporary project identification sign and project signage.
 - 7. Waste disposal services and dumpsters.
 - 8. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities include, but are not limited to, the following:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, and lights.
 - 3. Environmental protection.
 - 4. Tree and plant protection.
 - 5. Security enclosure and lockup.
 - 6. Temporary enclosures.
 - 7. Temporary partitions.
 - 8. Sidewalk Bridge for maintaining legal exits.
 - 9. Enclosure fence for the work site.

1.2 INFORMATIONAL SUBMITTALS

- A. Temporary Utilities: Each prime contractor shall submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Within 15 days of the date established for submittal of the Contractor's Construction Schedule, each prime contractor shall submit a schedule indicating implementation and termination of each temporary utility for which the Contractor is responsible.
- C. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- D. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent
- E. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- F. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage, including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
- G. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
- H. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
- I. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- J. Dust-Control: Submit coordination drawing and narrative that indicates the dust-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of the work.
 - 2. Location of proposed air filtration system discharge.
 - 3. Other dust-control measures.
- K. Waste management plan.

- L. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.3 DEFINITIONS

- A. Temporary Enclosure: As determined by Architect, temporary roofing is complete, insulated, all exterior wall openings are closed with temporary closures.
- B. Permanent Enclosure: As determined by Architect, permanent roofing is complete, insulated, and weather tight; exterior walls are insulated and weather tight; and all openings are closed with permanent construction or substantial temporary closures.
- C. Temporary Facilities: Construction, fixtures, fittings, and other built items required to accomplish the work, but which are not incorporated into the finished work.
- D. Temporary Utilities: A type of temporary facility, primary sources of electric power, water, natural gas supply, etc., obtained from public utilities, other main distribution systems, or temporary sources constructed for the project, but not including the fixtures and equipment served.
- E. Temporary Services: Activities required during construction, which do not directly accomplish the work.
- F. General Contractor is the "Prime Contractor"

1.4 QUALITY ASSURANCE

- A. Regulations: The contractor shall comply with industry standards and with applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, fire department and rescue squad rules.
 - 5. Environmental protection regulations.
- B. Standards: The Contractor shall comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."
- C. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with the normal application of trade regulations and union jurisdictions.

- D. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction. These utilities may not be available, refer to Summary of work for scope.
- B. Water and Sewer Service: Water from New Water System will need to be established with the local Utilities as well as metering. Owner will need to be notified when water is established with the City so an account can be established for payment if one hasn't been already. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service: Electric power from Owner's existing Utility Service system is available to service the building construction activities. The owner will need to be notified when work resumes onsite so the meter can be established and power can be turned back on. Owner will be responsible for payment for these charges. EC Provides connections and extensions of services as required for construction operations including several distribution panels throughout new building to service all areas of construction, GC provides trenching and backfill.

Additional Electric Service: Temp service will need to be provided and established with the Utility company by the EC as identified in the Multi Prime Summary of work for the Temp Trailers and Facilities. Meter to be established under Owner for payment and charges. EC Provides connections and extensions of services as required for construction operations including several distribution panels throughout new building to service all areas of construction, GC provides trenching and backfill.

- D. Gas Service: Gas Service from New feed will need to be established with the local Utilities as well as metering. Owner will need to be notified when service is established with the City so an account can be established for payment if one hasn't been already. Provide connections and extensions of services as required for construction operations.
- E. Cost or use charges for temporary facilities are not chargeable to the Owner or the Architect. The Architect will not accept a prime contractor's cost or use charges for temporary services or facilities as a basis of claim for an adjustment in the Contract Sum or the Contract Time.
- F. Other entities using temporary services and facilities include, but are not limited to, the following:
 - 1. Other nonprime contractors.

2. The Owner's work forces.
3. Occupants of the Project.
4. The Architect.
5. Testing agencies.
6. Personnel of government agencies.

1.6 DIVISION OF RESPONSIBILITIES

- A. General: These Specifications assign each prime contractor specific responsibilities for certain temporary facilities used by other prime contractors and other entities at the site. The Contractor for Site work is responsible for providing temporary facilities and controls that are not normal construction activities of other prime contractors and are not specifically assigned otherwise by the Architect.
- B. THE PRIME CONTRACTOR is responsible for the following:
 1. Installation, operation, maintenance, and removal of each temporary facility usually considered as its own normal construction activity, as well as the costs and use charges associated with each facility.
 2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
 3. Its own field office, complete with necessary furniture, utilities, telephone, and internet service.
 4. Its own storage containers for tools and storage of materials not incorporated into the building construction.
 5. Dewatering for their own construction operations.
 6. Collection and disposal of its own hazardous, dangerous, unsanitary, or other harmful waste material.
 7. Collection of its waste material and transporting to a dumpster.
 8. Secure lockup of its own tools, materials, and equipment.
 9. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.
 10. Snow and ice removal from all site construction areas.
 11. Barricades, warning signs, and lights related to the building work
 12. Temporary toilets, including disposable supplies.
 13. Temporary wash facilities, including disposable supplies
 14. Temporary partitions indicated on drawings or specifically called for in specifications, required for project phasing or necessary to perform the work. Excluding work of the abatement contractor.
 15. General disposal of wastes for all prime contracts from the new building areas including costs for dumpsters.
 16. Security enclosure and lockup.
 17. Project directional signage and safety signage.
 18. Creating a controlled access zone

19. Providing labor for street work, coordination, and deliveries. Provide signs and flags as required.
20. Temporary lighting in accessible areas.
21. Electric Power Service: Provide power to all trades by generator until permanent service is provided. Include temp outlets for all trades use during construction.
22. Water service: Provide water to all trades by hydrant permit until permanent service is provided. Include temp hose bibs and heat trace for winter conditions
23. Temp heat for the new building space while under construction for all trades
24. Site barricades, silt fence around site and stock piles. Dumpsters for site work.
25. Waste and water connections to the street and or site utility
26. Grading of site including seed and topsoil

- C. The **General Contractor / Site Work Contract** is responsible for the following:
1. Silt fence around the site and stock piles.
 2. Barricades, warning signs
 3. Erosion and Sediment Control and Dewatering.
 4. Stone Tracking pads.
 5. Utility markouts.
 6. Repair and maintenance of existing temp site fence, gates and wind screening.
 7. Installation of new temp post driven fencing to provide a complete enclosure around the construction site. Additional (2) sets of gates and 1,000 LF of fencing to be provided by GC for phasing work.
 8. Dumpsters for all construction activity along with dumpster pick up service to remove dumpster waste from the site as required for the duration of construction.
 9. Washout areas for construction vehicles as outlined in the Civil Drawings.
 10. Waste and Water connections to the street and site Utilities.
 11. Grading, leveling and proving suitable fill to support temporary facilities.
 12. Portable toilets for all trades per OSHA requirements as well as a cleaning service to clean all portable toilets weekly.
 13. Temporary wash facilities, including disposal and supplies.
 14. Temporary window opening protection, and temporary walls and doors.
 15. Cleaning service for GC and CM trailer once a week.
 16. Snow and ice removal for the entire project site.
 17. Cold weather procedures. Includes but is not limited to:
 - a. Cold weather paving mix
 - b. Cold weather Concrete mix
 - c. tenting and heating of masonry
 - d. blanketing of rebar
 - e. blanketing and heating of concrete for curing
 13. Hot weather procedures.

14. Project information sign 4'-0"hx8'-0"w metal sign with printed color rendering with project name and address, mounted to existing support system located on site logistics plan.
 15. All temp heating and fuel for temp heating. Refer to Multi Prime Contract Summary for more information.
 16. OSHA required protection and safety, which includes but is not limited to:
 - a.leading edge guardrails
 - b.floor oping protection
 - c.elevator shaft protection
 - d.controlled access zones
 - e.OSHA compliant scaffolding, hanging scaffold, hydro mobile, baker scaffold
 - f.stair guard rails
 - g.fire extinguishers
 - h.flagman
 - g.Temp safety and construction signage as well as directional signage
 17. Excuvation and backfill for all trade work.
- D. The **Electrical Contractor** is responsible for the following:
1. Nigh/day security camera system with DVR and monitoring for the purpose of the monitoring construction activity. Refer to Multi Prime Contract Summary for more information.
 2. Temp electric service for all temp offices. Refer to Multi Prime Contract Summary for more information.
 3. Temp electric service from existing owner provided temp service for all construction trade needs. Refer to Multi Prime Contract Summary for more information.
 4. Temp lighting as required by OSHA. Lighting needed for corridor, all rooms, stairs, staging area, site trailers.
- E. The **Plumbing Contractor** is responsible for the following:
1. Assist GC with water distribution from RPZ at hydrant. Provide hose connect and splitters to service the various trades and temp potable and washing station service till permanent water is established.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General: The prime contractor shall provide new materials. If acceptable to the Architect, undamaged, previously used materials in serviceable condition may be used. Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."
- C. For job-built sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding. Metal is an option as well.
- D. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8-inch- thick exterior plywood.
- E. Gypsum Wallboard: Provide 5/8 type x gypsum wallboard on interior walls of temporary offices or temporary partitions.
- F. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary offices, shops, and sheds.
- G. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- H. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- I. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.
- J. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.
- K. Water: Provide potable water approved by local health authorities.
- L. Pole driven Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 8 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide galvanized-steel bases for supporting posts.
- M. Open-Mesh Fencing: Provide 0.12-inch- thick, galvanized 2-inch chain link fabric fencing 8 feet high and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.2 EQUIPMENT

- A. General: The prime contractor shall provide new equipment. If acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Water Hoses: Provide 3/4-inch heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Heating and ventilating units: Provide temporary heating and ventilating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- G. Air Filtration Units: HEPA primary and secondary filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.
- H. Temporary Toilet Units: The General Contractor shall provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. One unit per ten workers on site. Provide one separate toilet unit for the use of the construction manager and one separate unit of women on site. Includes costs to provide construction managers trailer with an operational bathroom if construction managers trailer is equipped with one. Provide separate handicap temp toilet to be locked and used separate for construction manager.
- I. Fire Extinguishers: Each prime contractor will provide hand-carried, portable, UL-rated; Class A fire extinguishers for temporary offices and similar spaces. General Contractor is responsible for providing throughout the construction building as required by code for life safety and hung on temp wall hooks. Provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.

1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

2.3 TEMPORARY SUPPORT FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Temporary Field Offices: The prime contractor shall provide its own prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- C. General contractor to provide labor to clean and dispose of garbage from construction managers trailer once a week.
- D. Electrical contractor to provide all temp power for the project.
- E. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
- F. Store combustible materials apart from building.

2.4 TEMPORARY UTILITIES

- A. Telephone Service: Each contractor is responsible for his or her own telephone service.
- B. Provide at least one telephone at each site with answering machine.
- C. Display construction-related phone numbers at each phone.
 1. Fire emergency number.
 2. Rescue emergency number.
 3. Physician.
 4. Prime Contractors' home offices.
 5. Owner's representative.
 6. Architect's representative.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

- B. Each prime contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. The contractor shall provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. Drinking-Water Facilities: Each Contractor shall provide containerized, tap-dispenser, drinking-water units, including paper cup supply.
- D. Temporary Lighting:
 - 1. The Electrical Contractor will install and operate temporary lighting that will fulfill security and protection requirements without operating the entire electrical system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
 - 2. Operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.
- E. Security lighting for building exteriors shall be continuously operational and maintained.
- F. Temporary lighting shall be maintained in accordance with OSHA standards for power and foot candle levels in all areas while workers occupy the space
- G. The General Contractor will provide temporary lighting in the areas of renovation where the existing fixtures have been removed and the new lighting has not been installed
- H. Temporary Telephones: The prime contractor will provide temporary telephone service with answering machine throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office.
- I. Separate Telephone Lines: Provide additional telephone lines for the following:
 - 1. Where an office has more than 2 occupants, install a telephone for each additional occupant or pair of occupants.
 - 2. Provide a dedicated telephone line for a fax machine in each prime contractor's field office.
 - 3. At each telephone, post a list of important telephone numbers.

- J. Isolation of Work Areas: Prevent dust, fumes, and odors from entering outside our work areas.
- K. Each Contractor will perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Each prime contractor will locate field offices, storage trailers, sanitary facilities, and other temporary construction and support facilities for easy access.
- B. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- C. Refer to the phasing plans for locations of storage trailers
- D. Storage trailers/ containers: If required, each prime contractor will install storage containers equipped to accommodate materials and equipment involved. Storage trailers are to be located at each site in the designated staging areas located on the phasing plans.
- E. Dewatering Facilities and Drains: Each Contractor will comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. The General Contractor will remove snow and ice as required to minimize accumulations.
- F. The General Contractor will provide waste-collection containers in sizes adequate to handle waste from construction operations.
- G. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
- H. Temporary Lifts and Hoists: Each prime contractor will provide facilities for hoisting materials and employees.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.

- B. Protection of Existing Facilities: Each contractor will protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- C. Environmental Protection: Each contractor will provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.. Avoid using tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.
- D. Comply with work restrictions specified in Division 01 Section "Summary."
- E. Stormwater Control: The General Contractor will comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- F. Tree and Plant Protection: The General Contractor will install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- G. Enclosure Fence: The General Contractor when excavation begins will install an enclosure fence with lockable entrance gates. Install in a manner that will prevent the public and animals from easily entering the site, except by the entrance gates.
 - 1. Provide open-mesh, 8' high chain link fence with posts.
 - 2. Extent of Fence: As required to enclose entire excavation.
 - 3. Provide min. 2 double swing access gates and man gates. Each gate is to have a chain and padlock.
 - 4. Provide (2) keys for each lock to the Construction Manager.
 - 5. Remove fence upon completion of all exterior activities or sooner if directed by Construction Manager.
- H. Creating a controlled access zone around demo area.
- I. Providing overhead protection at all entry doors withing 30 feet of demo operations.
- J. Barricades, Warning Signs, and Lights: The General Contractor will comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- K. Temporary Signs: The General Contractor will prepare signs to provide directional information to construction personnel and visitors for each site. Unauthorized signs are not permitted.

1. For construction traffic control/flow at entrances/exits, as designated by the Owner.
 2. For warning signs as required
 3. Per OSHA standards as necessary
 4. For trailer identification
 5. For "No Smoking" safe work site at multiple locations.
 6. Project Information sign as designed by the architect.
- L. Temporary Egress: The General Contractor will maintain temporary egress from the site as indicated and as required by authorities having jurisdiction. Provide man door in site fence for ingress and egress.
- M. Temporary Enclosures: Each prime contractor will provide temporary enclosure for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.
 2. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use UL labeled, fire-retardant-treated material for framing and main sheathing.
- N. Temporary Fire Protection: Each prime contractor until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10, "Standard for Portable Fire Extinguishers," and NFPA 241, "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.
 4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
- O. Security Enclosure and Lockup: The General Contractor will install substantial temporary enclosure of partially completed areas of construction. Provide temporary doors and locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
1. Storage: Each prime contractor is responsible for their materials and equipment to be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Each Contractor is to avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 - 1. Protect porous materials from water damage.
 - 2. Protect stored and installed material from flowing or standing water.
 - 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 - 4. Remove standing water from decks.
 - 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before Permanent Enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 - 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 - 2. Keep interior spaces reasonably clean and protected from water damage.
 - 3. Periodically collect and remove waste containing cellulose or other organic matter.
 - 4. Discard or replace water-damaged material.
 - 5. Do not install material that is wet.
 - 6. Discard, replace or clean stored or installed material that begins to grow mold.
 - 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities and good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

- D. Termination and Removal: Unless the Architect requests that it be maintained longer each prime contractor will remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the property of each prime contractor.
 2. At Substantial Completion, Each prime contractor will be responsible to clean and renovate permanent facilities related to the work of their contract and used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION

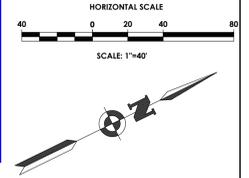
SITE LOGISTICS STUDY PLAN

NOTE: THIS PLAN SHOWN IS TO USED AS A CONCEPT PLAN WITH THE MINIMUM SHOWN. GC CONTRACT SHALL SHOW SITE LOGISTIC PLANNING FOR EACH PHASE OF THE MAJOR WORK RELATED TO THE CONSTRUCTION OF THIS BUILDING. THESE LOGISTIC PLANS SHALL INCLUDE:

- 1) EXCAVATION OF BUILDING
- 2) ALL CONCRETE POURS-SHOWN IN PHASES
- 3) STEEL ERECTION
- 4) GENERAL CONSTRUCTION
- 5) SITE WORK/UTILITY WORK

LEGEND

-  POST-MOUNTED SECURITY CAMERA
-  EXISTING CONSTRUCTION FENCE
-  NEW CONSTRUCTION FENCE TO MATCH HEIGHT OF EXISTING CONSTRUCTION FENCE
-  EXISTING TEMPORARY ELECTRICAL SERVICE
-  NEW TEMPORARY ELECTRICAL SERVICE



GENERAL CONTRACTOR TO FURNISH AND INSTALL 1,000 LF OF TEMPORARY POST DRIVEN FENCING 6'-0" HIGH WITH (2) SETS OF DOUBLE GATES 8' W X 6' H. LOCATION OF FENCING AND GATES ARE UNDEFINED AND ARE TO BE USED AS DIRECTED AND COORDINATED WITH THE CONSTRUCTION MANAGER. PROVIDE UPDATED LOGISTICS PLANS TO CONSTRUCTION MANAGER AND ARCHITECT FOR REVIEW AND APPROVAL. ANY LOCAL PERMITS REQUIRED SHALL BE PART OF THIS CONTRACT.

GENERAL CONTRACTOR TO FIX 10 LOCATIONS LOCATION OF EXISTING TEMPORARY POST DRIVEN CHAIN LINK SITE FENCING THAT IS FALLING, RESECURE EXISTING WIND SCREENING, AND PROVIDE 200 LF OF REPLACEMENT WIND SCREEN TO MATCH. THE CONSTRUCTION MANAGER AND DISTRICT MUST BE NOTIFIED AND AUTHORIZE ANY MODIFICATION TO EXISTING FENCING OR GATES. GENERAL CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EXISTING SITE FENCING AND GATES THROUGHOUT THE COURSE OF CONSTRUCTION.

THE LOCATION OF THE PROPOSED CONSTRUCTION FENCING IS APPROXIMATE, GENERAL CONTRACTOR TO PROVIDE CONSTRUCTION FENCING IN A LOCATION THAT COMPLETELY ENCLOSES THE CONSTRUCTION AREA AND SHALL MODIFY CONSTRUCTION FENCING AS NECESSARY TO EXECUTE WORK.

2ND MEANS CONSTRUCTION ENTRANCE WITH LOCKABLE GATES

TRAFFIC CONTROL FLAGGER

PROPOSED MOBILE CRANES LOCATIONS

MAIN CONSTRUCTION ENTRANCE WITH LOCKABLE GATES

TEMP PROJECT SIGN HERE

MATERIAL STORAGE TRAILERS

NEW TEMPORARY ELECTRICAL SERVICE

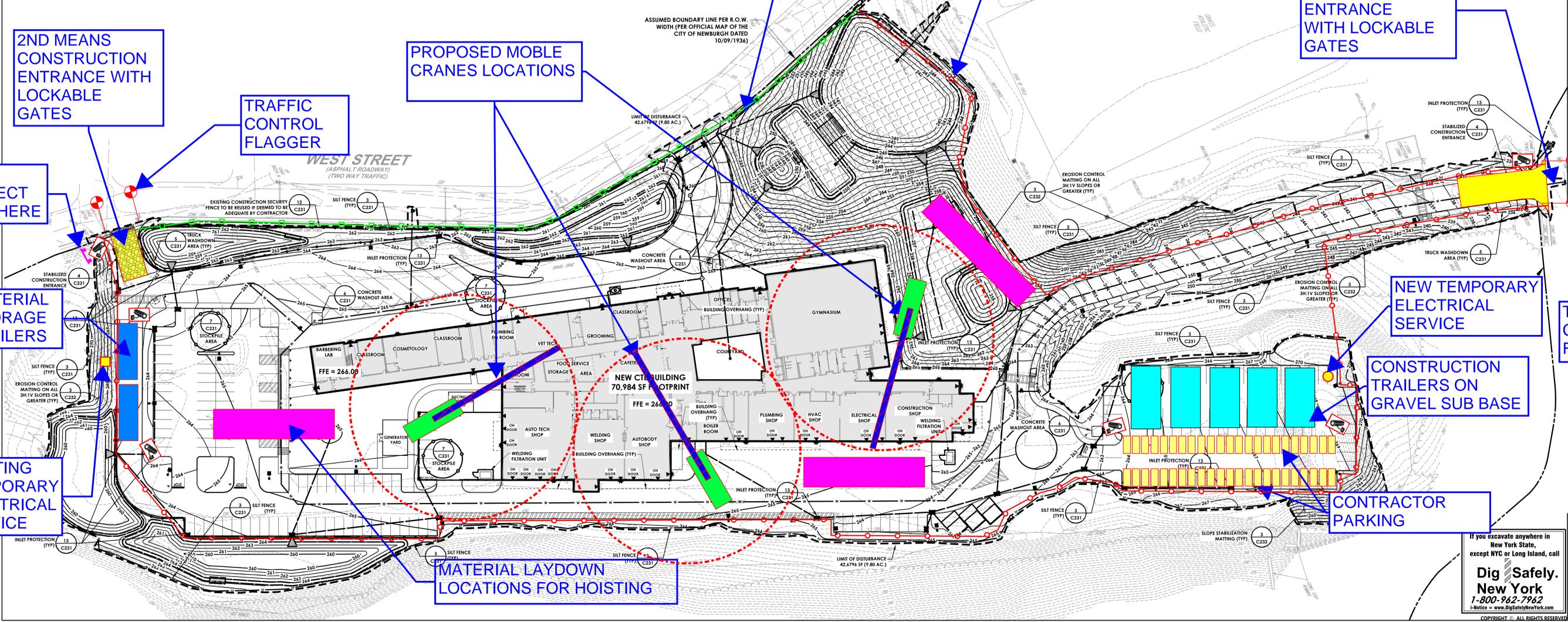
TRAFFIC CONTROL FLAGGER

CONSTRUCTION TRAILERS ON GRAVEL SUB BASE

EXISTING TEMPORARY ELECTRICAL SERVICE

CONTRACTOR PARKING

MATERIAL LAYDOWN LOCATIONS FOR HOISTING



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SECTION 016000 - – PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product and "Or Equivalent": Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that are equivalent or exceed those of specified product. To be considered acceptable by Architect they shall perform the functions imposed by the general design and meet the standards of named items and are submitted as herein indicated.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 - 3. Initial Submittal: Before Execution of the Agreement, submit 4 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - a. Furnish within 3 calendar days following the bid opening.
 - b. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 - 4. Completed List: Within 10 days after the openings of the bid, submit 4 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 5. Architect's Action: Architect will respond in writing to Contractor within 15 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.

- B. Substitution Requests: After Execution of Agreement: Submit substitution requests no later than within 30 calendar days. Request received later, may be considered or rejected at the discretion of Architect and shall be submitted as follows. Submit four copies of each request for consideration to the Architect. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use CSArch standard form included in the Project Manual.
 2. Identify specification Section including the date of request and all Prime Contracts involved.
 3. Identify the product, or the fabrication or installation method to be replaced in each request.
 4. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Prime Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.

- a. Architect will advise Prime Contractor when a request being processed must be delayed for concurrent review.
- b. Architect will request of Prime Contractor additional for evaluation within 7 working days of a request requiring Concurrent Review.
3. Architect will notify Prime Contractor of acceptance or rejection of proposed substitution within 15 working days minimum of receipt of additional information or documentation, whichever is later.
4. Use product specified if Architect cannot make a decision on use of a requested substitution within time indicated.
5. Form of Acceptance: Change Order.
 - a. Follow Division 1 Section "Contract Modification Procedures" for handling and processing Change Order.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
 1. Each Prime Contractor is responsible for providing products and construction methods compatible with products and construction methods of other Prime Contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
 - a. Coordinate with other Prime Contractor's compatible product issues at Project's progress meetings.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Store cementitious products and materials on elevated platforms.
 - 5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 7. Protect stored products from damage and liquids from freezing.
 - 8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 - 3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 2. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 3. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.

4. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named or un-named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
5. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 - a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
6. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
 - c. Custom: Where Specifications include the phrase "Custom colors, patterns, textures" or similar phrase, Architect will direct color, pattern, density, or texture that is not necessarily available from the manufacturer's standard product line.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Architect will consider requests for substitution if received within 30 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect.
- B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Prime Contractor's Construction Schedule.
 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 7. Requested substitution is compatible with other portions of the Work.
 8. Requested substitution has been coordinated with other portions of the Work by Prime Contractor.
 9. Requested substitution provides specified warranty.
 10. If requested substitution involves more than one Prime Contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all Prime Contractors involved.
 11. The request is directly related to "or an approved substitution" clause or similar language in the Contract Documents.
 12. The equipment or material must fit the space available for it in the building. No item will be considered if alteration of building structure or space is made necessary by a substitution request.
 13. If a substitution of material or any equipment item is accepted, the Prime Contractor is required to make all necessary corrections to details, clearances, etc., add to, furnish and install all additional materials or items required by the substitution, as determined by the Architect, at no additional cost to the Owner.
- C. In making request for substitution, Prime Contractor represents:
1. That the Prime Contractor has personally investigated the proposed substitute product and determined that it is equivalent to or superior in all respects to the specified product.
 2. That the Contractor will provide the same warranty for the substitution that is required for the specified product.
 3. Certifies that the substitution will not result in a cost disadvantage to the Owner; that all cost data presented is complete and that the Prime Contractor waives all claims for additional costs related to the substitution which subsequently may become apparent; and

4. Will coordinate the installation of the substitution, if accepted, making such changes as may be required to make the Work complete in all respects.
 5. Prime Contractor requesting substitution shall bear additional costs to all parties due to substitution including Architect redesigns and costs; associated but under separate contract.
- D. Prime Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents, does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

2.3 COMPARABLE PRODUCTS

- A. Conditions: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require extensive revisions to the Contract Documents that it is consistent with the Contract Documents, and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 EXECUTION (NOT USED)

3.1 END OF SECTION 016000

END OF SECTION

SECTION 017300 - - EXECUTION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 1. Construction layout.
 2. Field engineering and surveying.
 3. General installation of products.
 4. Coordination of Owner-installed products.
 5. Progress cleaning and protection during construction.
 6. Starting and adjusting.
 7. Protection of installed construction.
 8. Correction of the Work.

1.3 SUBMITTALS

- A. Qualification Data: For land surveyor.
- B. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.4 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (NOT USED)

PART 2 EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.

- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility, Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests for information (RFI) on standard form included in this Project Manual.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect and Construction Manager promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Architect and Construction Manager when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect and Construction Manager.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect and Construction Manager. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect and Construction Manager before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of 8 feet Insert dimension in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials:
- J. Use products, cleaners, and installation materials that are not considered hazardous.

3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction forces.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Pre-installation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING AND PROTECTION DURING CONSTRUCTION

- A. General: Each Subcontractor shall clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly among Subcontractor's employees. This includes sweeping floors clean as may be deemed necessary by Construction Manager. Dispose of material lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Each Prime Contractor shall clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate and when directed by Construction Manager.
- D. Installed Work: Prime Contractor shall keep all installed work clean for subcontractors retained who are no longer required to be present on site. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
 - 1. Provide cleaning products compliant with VOC requirements.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- K. Each day Prime Contractor shall affect the following:
 - 1. Areas of intense activity, such as cutting and sawing must be swept clean and reorganized at the end of each day.
 - 2. Areas of moderate activity such as installation of plumbing, ductwork, electrical work must be returned to good order at the end of each day.
 - 3. Debris below scaffolds (and shoring/reshoring) must at all times, be kept sufficiently consolidated to keep walkways free of tripping hazards. These work areas must also be swept clean immediately upon removal of scaffolds.
 - 4. All swept up debris, waste materials, and packing must be removed and placed in the dumpster by noon of the following workday.
 - 5. All stored materials must be kept in good order.
 - 6. As portions of the work are completed, all used and excess materials must be removed promptly.
 - 7. Daily clean-up and good housekeeping is the responsibility of each Prime Contractor individually and will be monitored by the Construction Site Coordinator.
 - 8. Prime Contractors and their retained subcontractors, Installers or manufacturers shall promptly comply with requests of Construction Manager to organize scattered materials.
- L. Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on an as needed basis or as directed by Construction Manager until building is ready for Substantial Completion or occupancy.
- M. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 Section "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.
- C. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- D. Clean and provide maintenance on completed construction as frequently as necessary or as requested by Construction Manager, through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.
- E. Limiting Exposure: Each Prime Contractor to supervise construction operations to assure that no part of the construction, complete or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessive static or dynamic loading.
 - 2. Excessive internal or external pressures.
 - 3. Excessive high or low temperatures.
 - 4. Thermal shock.
 - 5. Excessive high or low humidity.
 - 6. Air contamination or pollution.
 - 7. Ice or water.
 - 8. Solvents or chemicals.
 - 9. Light.
 - 10. Radiation.

11. Puncture.
12. Abrasion.
13. Heavy traffic.
14. Soiling, staining and corrosion.
15. Bacteria.
16. Rodent and insect infestation.
17. Combustion.
18. Electrical current.
19. High-speed operation.
20. Improper lubrication.
21. Unusual wear or misuse.
22. Contact between incompatible materials.
23. Destructive testing.
24. Misalignment.
25. Excessive weathering.
26. Unprotected storage.
27. Improper shipping and handling.
28. Vandalism or theft.

- F. Each Prime Contractor for its Work shall provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- G. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

END OF SECTION

SECTION 017329 - - CUTTING AND PATCHING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. C. When demolition leaves a construction surface unfinished, and the documents do not specify a finish, patch the remaining surface to match the existing adjacent surface.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.
- C. Demolition: Removal, Cutting.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.

5. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
7. Architect's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE

- A. Maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be removed; do not cut such existing construction beyond indicated limits.
- B. Maintain existing nonshell, nonstructural components (walls, flooring, and ceilings) not indicated to be removed; do not cut such existing construction beyond indicated limits.
- C. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- D. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 1. Primary operational systems and equipment.
 2. Air or smoke barriers.
 3. Fire-suppression systems.
 4. Mechanical systems piping and ducts.
 5. Control systems.
 6. Communication systems.
 7. Conveying systems.
 8. Electrical wiring systems.
 9. Operating systems of special construction in Division 13 Sections.
- E. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
 1. Water, moisture, or vapor barriers.
 2. Membranes and flashings.
 3. Exterior curtain-wall construction.
 4. Equipment supports.

5. Piping, ductwork, vessels, and equipment.
 6. Noise and vibration control elements and systems.
- F. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- G. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated or abandoned, bypass such services/systems before cutting to minimize and prevent interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.

- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 - b. Where demolition of a wall leaves a remaining perpendicular wall unfinished, restore the wall finish with similar materials blending the finishes into each other flush and seamlessly.
 - c. At masonry walls, cut any protruding reinforcing back below the finished surface. Remove enough masonry material to provide finished masonry faces within the existing coursing.
 - d. At masonry walls cut any protruding reinforcing back below the finished surface. Remove enough masonry material to provide finished masonry faces within the existing coursing.
 - e. Where demolition of a wall leaves a remaining end of the wall unfinished, restore the wall finish with similar materials blending the finishes into each other flush and seamlessly.
 - f. Where demolition of a wall leaves a remaining column exposed, provide 18 gauge aluminum column enclosure.
 - g. Where demolition of a wall leaves a remaining perpendicular window system unfinished, provide 18 gauge aluminum enclosure at the window and extend the sill material across the void.
 - h. Where the removal of a wall, equipment and/or furnishing leaves an unfinished condition at the floor, patch the floor and extend the finished floor system across the demolition area.

- i. Where the removal of a wall, equipment and/or furnishing leaves an unfinished condition at the ceiling, patch the floor and extend the finished ceiling system across the demolition area.
 - j. Where the removal of a louver, grill, ductwork or other construction in a finished space or elsewhere, fill the opening with material that matches the existing adjacent materials and finishes.
 - k. Where the removal leaves a raised painted edge, remove raised edge and feather paint finish to the extent that the raised painted edge is not detected.
- 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 - 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION

SECTION 017700 - - CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.
 - a. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.
 - b. Multiple Prime Contracts: Each Prime Contract is responsible for warranties related to provided Work.
 - 1) Specific requirements for warranties for the Work and products and installation that are specified to be warranted are included in the individual Sections of Divisions 02 through 28.
 - c. Related Sections include the following:
 - d. Division 01 Section "Closeout Procedures" for general closeout requirements.
 - e. Division 01 Section "Operation and Maintenance Data" for copies of warranties included in manuals.

1.3 DEFINITIONS

- a. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- b. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.4 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following:
1. In Application for Payment that coincides with, or first follows, the date of Substantial Completion is claimed, show 100 percent completion got portion of Work claimed on substantially complete.
 - a. Include supporting documentation for completion as indicated and a statement showing accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of the value of incomplete Work.
 - c. Application shall reflect Certificates of Partial Completion issued previously for Owner occupancy of designated portions of Work.
 2. Administrative actions and submittals that shall precede or coincide with this application include, but are not limited to, the following:
 - a. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - b. Advise Owner of pending insurance changeover requirements.
 - c. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - d. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - e. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - f. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - g. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - h. Complete startup testing of systems.
 - i. Submit test/adjust/balance records.
 - j. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - k. Advise Owner of changeover in heat and other utilities.
 - l. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - m. Complete final cleaning requirements, including touchup painting.
 - n. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
 - o. Maintenance instructions.

- p. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents to be turned over to Owner.
 - q. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - r. Prepare and submit Project Record Documents, operation and maintenance manuals.
 - s. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - t. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - u. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - v. Remove surplus materials rubbish and similar elements as directed by Construction Site Coordinator.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, the Construction Manager and Architect will either proceed with inspection or notify Prime Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Prime Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued. Architect will prepare and issue a Certificate of Substantial Completion, AIA G704, complete with signatures of Owner and Prime Contractor.
- 1. Reinspection: When Architect is required to perform second and additional inspections because of failure of Work to comply with certifications of Prime Contractor, Owner will compensate Architect for additional services and deduct amount paid from Final Payment to Prime Contractor.
 - 2. Results of completed inspection will form the basis of requirements for Final Completion.
- C. Should Architect consider that Work is finally complete in accordance with the requirements of the Contract Documents, he shall request Prime Contractor to make Project Closeout submittals.
- D. Should Architect consider that Work is not finally complete:
- 1. Punchlist: Architect shall notify Prime Contractor, in writing, stating reasons.
 - 2. Prime Contractor shall take immediate steps to remedy the stated deficiencies and send second written notice to Architect certifying that Work is complete.
 - 3. Architect will reinspect Work per "Reinspection" paragraph.

1.5 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and complete operations where required according to Division 01 Section "Payment Procedures."
 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and the punch list has been endorsed and dated by the Prime Contractor.
 3. Submit pest-control final inspection report and warranty.
 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes.
 5. Specified warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents in required formats.
 6. Insurance certificates for products and completed operation in effect for 12 months from date of final Application for Payment.
- B. Request: Submit in writing to Construction Manager and Architect listing incomplete items of preliminary procedures.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
- C. Evidence of Payments and Release of Liens: Submittals shall be duly executed before delivery to Construction Site Coordinator.
1. Contractor's Affidavit of Payment of Debts and Claims: AIA G706.
 2. Contractor's Affidavit of Release of Liens: AIA G706A, with the following:
 - a. Consent of Surety to Final Payment: AIA G707.
 - b. Prime Contractor's release of waiver of liens.
 - c. Separate releases of waivers of liens for subcontractors, suppliers, and others with lien rights against property of Owner, together with list of these parties.
- D. Final Adjustment of Accounts: Architect will prepare final Change Order, reflecting approved adjustments to Contract Sum not previously made by Change Orders.
- a. Submit final statement of accounting to Architect.
 - b. Statement shall reflect all adjustments.
 - c. Original Contract Sum.
 - d. Additional and deductions resulting from:
 - 1) Previous Change Orders.

- 2) Contingency Allowances: Credit unused remaining balance back to Owner by Change Order.
 - a) Do not include overhead and profit credit included in Base Bid as part of Change Order adjustment.
 - 3) Other Adjustments.
 - 4) Deductions for Uncorrected Work.
 - 5) Deductions for Reinspection Payments.
 - e. Total Contract Sum, as adjusted.
 - f. Previous Payments.
 - g. Sum remaining due.
- E. Final Application for Payment: Construction Manager shall notify Architect when all required closeout submittals are received and acceptable for Final Payment.
- F. Final Certification for Payment: Architect will issue final Certificate in accordance with provisions of General and Supplementary Conditions.
- G. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- H. Provide copies of each warranty to include in operation and maintenance manuals.
- 1.6 LIST OF INCOMPLETE ITEMS (PUNCH LIST)
- A. Preparation: Submit one copy of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.7 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Construction Manager or Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
1. Submit written warranties to the Construction Manager and Architect prior to the date certified for Substantial Completion. If the Architect Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Construction Manager and Architect.
 - a. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Prime Contractor during the construction period, submit properly executed warranties to the Construction Manager and Architect within 15 days of completion of that designated portion of the Work.
 2. Prepare a written document utilizing the appropriate form, ready for execution by the Prime Contractor, or the Contractor and subcontractor, supplier or manufacturer.
 3. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Prime Contractor, or by the Prime Contractor's, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 4. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 by 11 inch paper.
 - a. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a type description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 - b. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES", the Project title or name, and the name of the Contractor.
 5. When operating and maintenance manuals are required for warranted construction, provide warranty, for inclusion in that required manual.
- B. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- C. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

- D. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Prime Contractor providing Work is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- E. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- F. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

- b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
- c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- d. Remove tools, construction equipment, machinery, and surplus material from Project site.
- e. Remove snow and ice to provide safe access to building.
- f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- h. Sweep concrete floors broom clean in unoccupied spaces.
- i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
- j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- k. Remove labels that are not permanent.
- l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
- m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- n. Replace parts subject to unusual operating conditions.
- o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
- p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
- q. Clean ducts, blowers, and coils if units were operated without filters during construction.
- r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
- s. Leave Project clean and ready for occupancy.

- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

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SECTION 017823 - - OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 1. Operation and maintenance documentation directory.
 2. Emergency manuals.
 3. Operation manuals for systems, subsystems, and equipment.
 4. Maintenance manuals for the care and maintenance of products, materials, and finishes and systems and equipment.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 SUBMITTALS

- A. Initial Submittal: Submit 2 draft copies of each manual at least 15 days before requesting inspection for Substantial Completion. Include a complete operation and maintenance directory. Architect will return one copy of draft and mark whether general scope and content of manual are acceptable.
- B. Final Submittal: Submit four of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 15 days after final inspection.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 PRODUCTS OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

2.1 MATERIALS

- A. Organization: Include a section in the directory for each of the following:
 - 1. List of documents.
 - 2. List of systems.
 - 3. List of equipment.
 - 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 - 1. Title page.
 - 2. Table of contents.
 - 3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 - 1. Subject matter included in manual.
 - 2. Name and address of Project.
 - 3. Name and address of Owner.
 - 4. Date of submittal.
 - 5. Name, address, and telephone number of Contractor.
 - 6. Name and address of Architect.
 - 7. Cross-reference to related systems in other operation and maintenance manuals.

- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
 - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
 - 1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2 by 11 inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 - 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
 - 4. Supplementary Text: Prepared on 8-1/2 by 11 inch white bond paper.
 - 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
 - 1. Type of emergency.
 - 2. Emergency instructions.
 - 3. Emergency procedures.

- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
 - 1. Fire.
 - 2. Flood.
 - 3. Gas leak.
 - 4. Water leak.
 - 5. Power failure.
 - 6. Water outage.
 - 7. System, subsystem, or equipment failure.
 - 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System, subsystem, and equipment descriptions.
 - 2. Performance and design criteria if Contractor is delegated design responsibility.
 - 3. Operating standards.
 - 4. Operating procedures.
 - 5. Operating logs.
 - 6. Wiring diagrams.
 - 7. Control diagrams.
 - 8. Piped system diagrams.
 - 9. Precautions against improper use.
 - 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.

4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.
 7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name, and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Product Information: Include the following, as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
1. Inspection procedures.

2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name, and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
1. Standard printed maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training videotape, if available.

- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 - 1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 - 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared Record Drawings in Division 01 Section "Project Record Documents."

- G. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

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SECTION 017836 - - WARRANTIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

SUMMARY

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
 - 2. General closeout requirements are included in Section "Project Closeout."
 - 3. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.
- C. Multiple Prime Contracts: Each Prime Contract is responsible for warranties related to provided Work
 - a. Specific requirements for warranties for the Work and products and installation that are specified to be warranted are included in the individual Sections of Divisions 02 through 32.

DEFINITIONS

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding; reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Prime Contractor providing Work is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- E. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.
 - 1. SUBMITTALS
- F. Submit written warranties to the Construction Manager and Architect prior to the date certified for Substantial Completion. If the Architect Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
 - a. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Prime Contractor during the construction period, submit properly executed warranties to the Construction Manager and Architect within 15 days of completion of that designated portion of the Work.
- G. Prepare a written document utilizing the appropriate form, ready for execution by the Prime Contractor, or the Contractor and subcontractor, supplier or manufacturer.

- H. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Prime Contractor, or by the Prime Contractor's, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- I. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2 by 11 inch paper.
 - a. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a type description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
 - b. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES", the Project title or name, and the name of the Contractor.
- J. When operating and maintenance manuals are required for warranted construction, provide warranty, for inclusion in that required manual.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

6.1 END OF SECTION 017836

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SECTION 017839 - - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Administer two sets of marked-up Record Documents.
- B. Record Product Data: Submit two copies of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 PRODUCTS

2.1 RECORD DRAWINGS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Architect's and Construction Manager's reference during normal working hours.
- B. Record Prints: Maintain two sets of blue or black line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

2. Prior to submitting final Application for Payment, Prime Contractor shall confirm that all changes and deviations have been recorded on the drawings and indicate such by adding signature and date to each drawing.
 - a. Include with submission revised shop drawings which reflect any change or deviation in the installed Work.
 - b. Deliver to the Construction Manager and Architect, a transmittal indicating that complete Record Drawings and record shop drawings have been administered prior to final Application for Payment.
3. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Accurately record information in an understandable drawing technique. Provide felt marking pen for marks conforming to following color code:
 - 1) General Construction: Red.
 - 2) HVAC: Green.
 - 3) Electrical: Purple.
 - 4) Plumbing: Blue.
 - 5) Other Notations: Black.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
 - e. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - f. Accurately record information in an understandable drawing technique.
 - g. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
4. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.

- j. Changes made by Change Order or Construction Change Directive.
 - k. Changes made following Construction Manager/Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
 - o. Label each document "Project Record" in two-inch printed letters.
5. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 6. Mark record sets with multiple colors to distinguish between changes for different categories of the Work at same location.
 7. Mark important additional information that was either shown schematically or omitted from original Drawings.
 8. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
 9. Mark important additional information that was either shown schematically or omitted from original Drawings.
 10. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 11. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
 - 1. Update Record Documents no less than once per month, as a requirement of the Contract. Construction Site Coordinate shall delay review of Applications for Payment (pencil copies) until the appropriate information is documented.
- B. Maintenance of Record Documents and Samples: Stored Record Documents and Samples shall be maintained in the Construction Site Coordinator's field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Access shall be provided to Project Record Documents for Prime Contractor's reference during normal working hours.

END OF SECTION 017839

END OF SECTION

SECTION 017900 - – DEMONSTRATION AND TRAINING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training DVD.

1.3 SUBMITTALS

- A. Instruction Program: Submit four copies of outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. At completion of training, submit four complete training manual(s) for Owner's use.
- B. Qualification Data: For instructor.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Demonstration and Training Videotapes: Submit four copies within seven days of end of each training module.
 - 1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name of Architect.
 - c. Name of Contractor.
 - d. Date videotape was recorded.
 - e. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

2. Transcript: Prepared on 8-1/2 by 11 inch paper, punched and bound in heavy-duty, 3-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding videotape. Include name of Project and date of videotape on each page.

1.4 QUALITY ASSURANCE

- A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section "Quality Requirements," experienced in operation and maintenance procedures and training.
- B. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
 1. Inspect and discuss locations and other facilities required for instruction.
 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 3. Review required content of instruction.
 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:
 1. Equipment, including food service equipment and residential appliances.
 2. Fire-protection systems, including fire alarm and fire-extinguishing systems.

3. Intrusion detection systems.
 4. Conveying systems, including elevators and wheelchair lifts.
 5. Heat generation, including boilers feedwater equipment, pumps and water distribution piping.
 6. Refrigeration systems, including condensers, pumps and distribution piping.
 7. HVAC systems, including air-handling equipment, air distribution systems and terminal equipment and devices.
 8. HVAC instrumentation and controls.
 9. Electrical service and distribution, including transformers, switchboards, panelboards and motor controls.
 10. Packaged engine generators, including transfer switches.
 11. Lighting equipment and controls.
 12. Communication systems, including intercommunication, surveillance, clocks and programming, voice and data and television equipment.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:
1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project Record Documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
 3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.

- e. Sequences for electric or electronic systems.
- f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a combined training manual.
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Owner will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner, through Construction Site Coordinator, with at least seven days' advance notice.
- D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a written performance-based test.
- E. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.3 DEMONSTRATION AND TRAINING VIDEOTAPES

- A. Videotape Format: Provide high-quality VHS color videotape in full-size cassettes.
- B. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and training. Display continuous running time.
- C. Transcript: Provide a typewritten transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

END OF SECTION 017900

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SECTION 019113 - GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general requirements that apply to implementation of commissioning without regard to specific systems, assemblies, or components.
- B. Commissioning is a systematic process of verifying that building systems perform interactively according with the owner's operational needs, the design documents, manufacturer's recommendations, good engineering and workmanship practices.
- C. The commissioning process shall encompass and coordinate the functions of system documentation, equipment startup, control system calibration, testing and balancing, performance testing and training.
- D. Commissioning during the construction phase is intended to achieve the following specific objectives according to the Contract Documents:
 - 1. Verify that applicable equipment and systems are installed according to the contract documents, manufacturer's recommendations and to industry accepted minimum standards and that they receive adequate operational checkout by installing contractors.
 - 2. Verify and document proper performance of equipment and systems.
 - 3. Verify that O&M documentation provided for the project is complete, accurate and represents the actual installed equipment.
 - 4. Verify that the Owner's operating personnel are adequately trained.

1.3 ABBREVIATIONS:

- A. The following are common abbreviations used in the Specifications.
 - 1. A/E: Architect/Engineer.
 - 2. CTR: Prime Contractor.
 - 3. Cx: Commissioning .
 - 4. CxA: Commissioning Authority .

5. Cx Plan: Commissioning Plan Document .
6. CM: Construction Manager.
7. EC: Electrical Contractor.
8. FT: Functional Performance Test.
9. MC: Mechanical Contractor.
10. PC: Plumbing Contractor.
11. PFC: Pre-Functional Check List
12. PFI: Pre-Functional Inspection.
13. TAB: Test and Balance Contractor.

1.4 DEFINITIONS

- A. Acceptance Phase: Phase of construction after startup and initial checkout when functional performance tests, O&M documentation review and training occurs.
- B. Acceptance Criteria: The criteria established by the Owner and design team which defines the specified requirements that a component or system must meet under all ranges of actual loads. The CxA's prefunctional inspections and functional testing determines if the acceptance criteria have been met.
- C. Approval: Acceptance that a piece of equipment or system has been properly installed and is functioning in the tested modes according to the Contract Documents.
- D. Architect/Engineer (A/E): The prime consultant (architect) and subconsultants who comprise the design team, generally the HVAC mechanical designer/engineer and the electrical designer/engineer.
- E. Building Systems: The architectural, mechanical and electrical and control systems along with their respective subsystems, equipment and components.
- F. Commissioning: A quality control process that is to verify that specified components and building systems have been installed and properly started up and then functionally tested to verify and document proper operation through all specified modes of operation and conditions, all of which shall perform in conformity with the owner's requirements. In addition, training of operations and maintenance personnel, identified by the owner, is verified, and final project operations and maintenance documents are reviewed for completeness.
- G. Commissioning Authority: The owner's representative that verifies the commissioning process is properly carried out. The Commissioning Authority that is hired by the owner leads the commissioning process, carries out the detailed planning and implementation of the commissioning process and makes final recommendations to the owner regarding the performance of the commissioned building systems.

- H. Commissioning Plan: An overall plan, which provides the structure, schedule and coordination planning for the commissioning process.
- I. Construction Manager (CM): The contracting and managing authority for the owner over the design and/or construction of the project. The CM is responsible for working with the various parties involved in the project to plan and schedule work, facilitate communication, and coordinate activities between members of the construction and commissioning teams.
- J. Contract Documents: The documents binding on parties involved in the construction of the project (drawings, specifications, change orders, amendments, contracts, Cx Plan, etc.) L. Control System – The central building energy management control system.
- K. Datalogging: Monitoring flows, currents, status, pressures, etc., of equipment using stand along dataloggers separate from the control system.
- L. Deferred Functional Tests: FTs that are performed later, after substantial completion, due to partial occupancy, equipment, season requirements, design or other site conditions that disallow the test from being performed.
- M. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents (that is, does not perform properly or is not complying with the design intent).
- N. Factory Testing: testing of equipment on site or at the factory by factory personnel with or without an Owner's representative present. The CTR furnishing the equipment is responsible for providing all testing documentation as per the contact documents.
- O. Functional Performance Test (FT): Test of the dynamic function and operation of equipment and systems using manual (direct observation) or monitoring methods. Functional testing is the dynamic testing of systems (rather than just components) under full operation. Systems are tested under various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, fire alarm, power failure, etc. The systems are run through all the control system's sequences of operation and components are verified to be responding as the sequences state. Traditional air or water test and balancing (TAB) is not functional testing, in the commissioning sense of the word. TAB's primary work is setting up the system flows and pressures as specified, while functional testing is verifying that which has already been set up. The Commissioning Authority develops the functional test procedures in a sequential written form, coordinates, oversees and documents the actual testing, which is usually performed by the installing contractor or vendor. FTs are performed after prefunctional inspections and startup is complete.
- P. Functional Testing Procedures: The step-by-step process that must be executed to fulfill the functional testing requirements. The test procedures are developed by the CxA.

- Q. Indirect Indicators: Indicators of a response or condition, such as a reading from a controls system screen reporting a damper to be 100% closed.
- R. Contractors (CTR): The company(s) engaged by the Owner to provide and/or install equipment and building systems in accordance with the contract specifications, drawings, manufacturer's recommendations and good engineering and workmanship practices. The term CTR may refer to one or more of the Mechanical Contractor, Electrical Contractor, or Plumbing Contractor responsible for all or part of the contract work for a given system or process.
- S. Manual Test: Using hand-held instruments, immediate control system readouts, or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation.")
- T. Monitoring: The recording of parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of control systems.
- U. Non-Compliance: See Deficiency.
- V. Non-Conformance: See Deficiency.
- W. Over-written Value: Writing over a sensor value in the control system to see the response of a system (e.g. changing the outside air temperature value from 50F to 75F to verify economizer operation.) See also Simulated Signal.
- X. Operations and Maintenance (O&M) Manual: The document that records the information pertinent to the operations and maintenance of the components, equipment, subsystems, and systems for the building.
- Y. Pre-functional Inspections (PFI): A list of the items to inspect and elementary component tests to conduct to verify proper installation of equipment. Lists are developed and provided by the CxA and are completed and returned by the appropriate CTRs. Pre-functional inspections are primarily static inspections and procedures to prepare the equipment or system for initial operation. However, some pre-functional inspection items entail simple testing of the functionality of a component, a piece of equipment or system. The word pre-functional refers to before functional testing. Pre-functional inspections augment and are combined with the manufacturer's startup checklists. Even without a commissioning process, installers typically perform some, if not many, of the pre-functional inspection items a Commissioning Authority will recommend. However, few installers document in writing the execution or results of these inspected items.
- Z. Project Manager (PM): The contracting and managing authority for the owner over the design and/or construction of the project. See Construction Manager.

- AA. Sampling: Performing PFIs or functionally testing only a fraction of the total number of identical or near identical pieces of equipment.
 - BB. Seasonal Performance Tests: FTs that are deferred until the system(s) will experience conditions closer to their design conditions.
 - CC. Simulated Condition: Condition that is created for the purpose of testing the response of a system .
 - DD. Simulated Signal: Disconnecting a sensor and using a signal generator to send an amperage, resistance or pressure to the transducer and DDC system to simulate a sensor value.
 - EE. Specifications: The construction specifications of the Contract Documents.
 - FF. Staged Commissioning: Commissioning that is completed in phases in order to identify issues early and incorporate commissioning throughout the construction process. Generally, this applies to pre-functional inspection and it is phased in the following manner: Stage 1 - substantial installation completion (equipment substantially installed without power or controls complete; Stage 2 – power completed, equipment start-up completed and controls completed (Stage 2 will generally precede functional testing); Stage 3 – final inspection.
 - GG. Startup: The initial starting or activating of dynamic equipment, including executing prefunctional inspections. Startup of complex systems is typically performed by an authorized manufacturer’s representative only after the installing contractor has completed all installation work and pre-functional inspections.
 - HH. Subs: The sub-contractors to the prime contractors who provide and install building components and systems.
 - II. Trending: Monitoring using the building control system.
 - JJ. Vendor: Supplier of equipment.
 - KK. Warranty Period: Warranty period for specific equipment and components. Warranties are defined in the appropriate sections of these specifications.
- 1.5 COORDINATION
- A. Commissioning Team: The members of the commissioning team consist of the Owner, Design Architect/Engineer (A/E), Commissioning Authority (CxA), Construction Manager (CM), and the Installers (CTR), which includes: the Mechanical Contractor (MC), the Electrical Contractor (EC), the TAB Contractor, the Controls Contractor (CC), any other installers or suppliers of equipment.

- B. Management: The CxA has been hired directly by the Owner. The CxA directs and coordinates the commissioning activities and reports to the Owner and the CM. All members work together to fulfill their contracted responsibilities and meet the objectives of the Contract Documents.
- C. Scheduling: The CxA shall work with the CM and each Contractor according to established protocols to schedule the commissioning activities. The CM will integrate all commissioning activities into the master schedule based on review of the Cx Plan and input from the CxA. All parties will address scheduling problems and make necessary notifications in a timely manner to expedite the commissioning process.

1.6 COMPENSATION

- A. If A/E, CM, CxA, or Owner's staff perform additional services or incur additional expenses due to actions of Contractor listed below, compensate Owner for such additional services and expenses.
 - 1. Failure to provide timely notice of commissioning activities schedule changes.
 - 2. Failure to meet acceptance criteria for re-testing of any FPT deficiencies.
- B. Contractor shall compensate Owner for such additional services and expenses at the rate of \$150 per labor hour, plus travel expenses.

1.7 COMMISSIONING PROCESS

- A. Commissioning Plan: The Commissioning Plan will be provided by the CxA subsequent to contractor selection and will be binding on the Contractor. The Commissioning Plan is a dynamic document that will provide direction throughout the commissioning process. The plan puts a significant emphasis on defining roles and responsibilities and establishing communication protocols. The plan will be amended as the construction progresses to include updated schedules, pre-functional inspection items and functional testing procedures. The Specifications will take precedence over the Commissioning Plan.
- B. Commissioning Process: The following narrative provides a brief overview of the typical commissioning tasks performed during construction and the general order in which they occur:
 - 1. Commissioning during construction begins with a scoping meeting conducted by the CxA where the commissioning process is reviewed with the commissioning team members.
 - 2. Additional meetings will be required throughout the construction, scheduled by the CxA with necessary parties attending, to plan, scope, coordinate, schedule future activities and resolve any problems.

3. Equipment documentation is submitted to the CxA during the normal submittals process and is performed concurrently with the A/E's submittal review process, including detailed start-up procedures.
4. The CxA works with the MC and the other installers in reviewing and incorporating their startup plans and startup documentation into the pre-functional inspections and functional testing procedures.
5. In general, the checkout and performance verification proceeds from simple to complex; from component level to equipment to system and intersystem levels with prefunctional inspections being completed before functional testing.
6. The CTRs, under their own direction, execute and document the initial checkout, equipment start-up and certification the equipment is ready for pre-functional inspections and functional testing. If required by the CxA, this certification will be accomplished in a phased approach under the direction of the CxA. The CxA may witness the start-up of selected equipment.
7. The prefunctional checklists prepared by the CxA shall be filled out by the MC, EC, PC, and CC and returned to the CM following the procedure agreed upon at the commissioning scoping meeting. Once all checklist items are documented to be complete for a given system the CM shall be notified and shall, in turn, notify the CxA that the system is ready for a final prefunctional inspection.
8. Prefunctional inspections and documentation shall be completed before proceeding with scheduled functional tests.
9. The CxA develops specific equipment and system functional performance test procedures. The CTRs review and, if necessary, recommend modifications to the procedures.
10. The procedures are executed by the CTRs, under the direction of, and documented by the CxA.
11. Items of non-compliance in material, installation or setup are corrected at the CTRs expense and the system retested.
12. The CxA records the deficiencies and maintains a log detailing and tracking the correction of deficiencies identified during the Cx process and distributes these reports to the CM, CTRs, Owner and A/E.
13. The CxA reviews the O&M documentation for completeness.
14. Commissioning is completed before acceptance.
15. The CxA reviews, pre-approves and observes training provided by the CTRs and the manufacturer's services representatives and verifies that it was completed.
16. The CxA performs a warranty phase review and conducts deferred testing as specified or required.

1.8 RESPONSIBILITIES

- A. The responsibilities of various parties in the commissioning process are provided in this section. Further specific responsibilities, when required, of the Mechanical Contractor,

TAB Contractor, Controls Contractor and Electrical Contractor are described in their particular contract documents.

B. All Parties:

1. Follow the Commissioning Plan.
2. Attend the commissioning scoping meeting and additional meetings as necessary.
3. Provide timely responses to requests made by other members of the commissioning team as they related to the requirements of this section.

C. Architect/Engineer (A/E):

1. Attend the commissioning scoping meeting and selected commissioning team meetings.
2. Understand and follow the Commissioning Plan.
3. Perform normal submittal review, construction observation, as-built drawing preparation, O&M manual preparation, etc., as contracted. On site observation should be completed just prior to system startup.
- 4.
5. Coordinate and participate in resolution of design non-conformance and design deficiencies identified during commissioning and during the warranty period.
6. Participate in the resolution of system installation deficiencies identified during commissioning, as requested by the CxA.
- 7.
8. Coordinate resolution of design non-conformance and design deficiencies identified during warranty-period commissioning.

D. Commissioning Authority (CxA)

1. The CxA is not responsible for design concept, design criteria, compliance with codes, design or construction scheduling, cost estimating, or construction management. The CxA may assist with problem solving non-conformance or deficiencies, but ultimately that responsibility resides with the A/E and CM according to their respective contracts with the Owner. The primary role of the CxA is to develop and coordinate the execution of the Commissioning Plan, observe and document system performance, and identify deficiencies requiring correction. Specifically, the goal of commissioning is to ensure that systems are functioning in accordance with the documented design intent and in accordance with the Contract Documents. The CTR and/or vendor's representative will provide all tools or the use of tools to start, check-out and functionally test equipment and systems, except for specified testing with portable data-loggers, which shall be supplied and installed by the CxA.
2. Coordinate and direct the commissioning activities in a logical, sequential and efficient manner using consistent protocols and forms, centralized documentation, clear and regular communications and consultations with all necessary parties, frequently updated timelines and schedules and technical expertise.

3. Coordinate the commissioning work and verify that commissioning activities are being incorporated into the master schedule.
4. Revise the Commissioning Plan as necessary.
5. Plan and conduct a commissioning scoping meeting.
6. Request and review additional information required to perform commissioning tasks, including O&M materials, contractor start-up and checkout procedures.
7. Before startup, gather and review the current control sequences and interlocks and work with installers and design engineers until sufficient clarity has been obtained, in writing, to be able to write detailed testing procedures.
8. Review equipment submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with the A/E reviews.
9. Write and distribute prefunctional inspection checklists. The CxA shall provide a list of the required information submittals.
10. Receive notice that prefunctional checklists have been completed and systems are ready for final prefunctional inspection. Complete inspections and verify that systems are ready for startup.
11. Perform site visits, as necessary, to observe component and system installations. Attend selected planning and job-site meetings to obtain information on construction progress. Review construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving any discrepancies.
12. Witness all or part of the HVAC piping test and flushing procedure, sufficient to be confident that proper procedures were followed. Document this testing and include the documentation in the commissioning record to be provided with the final Cx Report. Notify CM of any deficiencies in results or procedures.
13. Witness all or part of any ductwork testing and cleaning procedures, sufficient to be confident that proper procedures were followed. Document this testing and include the documentation in the commissioning record to be provided with the final Cx Report. Notify CM of any deficiencies in results or procedures.
14. With necessary assistance and review from the Contractor and installers, write the functional performance test procedures for equipment and systems. This may include energy management control system trending, stand-alone datalogger monitoring or manual functional testing, as appropriate to document compliance with the specified sequences of operation.
15. Evaluate systems startup procedures by reviewing start-up reports and by selected site observation.
16. Review TAB execution plan.
17. Coordinate and observe functional testing of the control systems. Coordinate retesting as necessary until satisfactory performance is achieved.
18. Review air and water systems TAB by spot testing, by reviewing completed reports and by selected site observation after receiving the final TAB report.
19. Analyze any functional performance trend logs and monitoring data to verify system functional performance following completion of TAB.

20. Maintain a master deficiency and resolution log and a separate functional testing record. Provide written progress reports and test results with recommended actions.
21. Review equipment warranties to verify that the Owner's responsibilities are clearly defined.
22. Oversee and approve the training of the Owner's operating personnel.
23. Compile and maintain a commissioning record.
24. Review and approve the preparation of O&M manuals.
25. Provide draft and final commissioning reports.
26. Coordinate and supervise required seasonal or deferred testing and deficiency corrections. Seasonal tests will be identified in the Cx Plan.
27. Return to the site at approximately 10 months into the 12 month warranty period and review with facility staff the current building operation and the condition of outstanding issues related to the original and seasonal commissioning. Also interview facility staff and identify problems or concerns they have operating the building as originally intended. Make suggestions for improvements and for recording these changes in the systems manual. Identify areas that may come under warranty or under the original construction contract. Assist facility staff in developing reports, documents and requests for services to remedy outstanding problems.
28. Identify any warranty phase deficiencies and provide detailed documentation to the Owner and CM.

E. Construction Manager (CM)

1. Manage the contracts of each Prime Contractor.
2. Attend a commissioning scoping meeting and other commissioning team meetings.
3. Oversee completion of PFCs and organize completed checklists in a field binder for review by the CxA. Maintain the active checklist binder, ensuring all CTRs return partially or fully completed checklists. Assist the CxA in reviewing checklist progress throughout construction.
4. Review commissioning progress and deficiency reports and facilitate the communication of formal responses from the CTRs to the CxA.
5. Coordinate the resolution of scheduling conflicts, including those identified by the CxA with respect to commissioning tasks. Where inadequate time allotments are provided for commissioning inspections or tests, work with the CxA to revise schedule dates accordingly.
6. Provide final approval for the completion of the commissioning work.
7. Address any seasonal or deferred testing and any deficiency issues.

F. Prime Contractors (CTRs)

1. Include the cost of supporting commissioning in the contract price.

2. Attend a commissioning scoping meeting and other commissioning team meetings.
3. Furnish a copy of all construction documents, addenda, change orders and submittals and shop drawings related to commissioned equipment to the CxA.
4. Provide the requisite readiness notification to the CxA for equipment prefunctional inspections, startup, and functional testing.
5. Participate in pre-functional inspections, startup and functional testing of all equipment, as directed by the CxA.
6. At least one qualified individual shall be available on-site, as requested by the CxA.
7. Oversee completion of PFCs and organize completed checklists in a field binder for review by the CM and CxA. Assist the CxA in reviewing checklist progress throughout construction.
8. Review the functional performance test procedures submitted by the CxA, prior to testing.
9. Provide the necessary passwords and system access to the control systems to allow the CxA to adjust set points and other systems parameters. The access level should be at the highest level possible with the exception of allowing the CxA to modify the programming sequences.
10. Review commissioning progress and deficiency reports and issue written responses to the CxA as needed.
11. Coordinate the resolution of deficiencies identified by the CxA.
12. Document the completion and/or action taken for the resolution of deficiencies as directed by the CxA and described in the Cx Plan.
13. Coordinate and perform the training of owner personnel as specified. Direct the scheduling of training by CTRs in accordance with their contract requirements.
14. Ensure that all installers execute their commissioning responsibilities according to the Contract Documents and schedule.
15. Prepare O&M manuals, according to the Contract documents, including clarifying and updating the original sequences of operation to as-built conditions. Provide copies to the CxA for review and comment.
16. Coordinate the resolution of scheduling conflicts, including those identified by the CxA with respect to commissioning tasks. Where inadequate time allotments are provided for commissioning inspections or tests, work with the CxA to revise schedule dates accordingly.
17. Assist the CxA as necessary in the seasonal or deferred testing and deficiency corrections required by the specifications and the Commissioning Plan.
18. Ensure that installers execute seasonal or deferred functional performance testing, witnessed by the CxA, according to the specifications and the Commissioning Plan.
19. Ensure that installers correct deficiencies and make necessary adjustments to O&M manuals and as-built drawings for applicable issues identified in any seasonal testing.

1.9 SYSTEMS TO BE COMMISSIONED

- A. The following systems shall be commissioned:
 - 1. HVAC systems and equipment.
 - 2. Building automation and temperature control systems.
 - 3. Lighting control systems.
 - 4. Domestic hot water system.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 MEETINGS

- A. Scoping Meeting: The CxA will schedule, plan and conduct a commissioning scoping meeting with the entire commissioning team in attendance. Meeting minutes will be distributed to all parties by the CxA. Information gathered from this meeting will allow the CxA to revise the Commissioning Plan, which will also be distributed to all parties.
- B. Functional Performance Testing Meeting: The CxA will schedule, plan and conduct a functional performance test meeting with the entire commissioning team in attendance to kick-off the FT phase. Required attendees will be identified in advance of the meeting based on the scope of testing required.
- C. Miscellaneous Meetings: Progress meetings will be scheduled and conducted by the CxA, as necessary. Other meetings will be planned and conducted by the CxA as the construction progresses. These meetings will cover coordination, deficiency resolution and planning issues with particular CTRs. The CxA will plan these meetings and will minimize unnecessary time being spent by CTRs.

3.2 REPORTING

- A. The CxA will provide regular reports with increasing frequency as construction and commissioning progresses. Reports will be developed and issued on an as-needed basis according to the activities being performed at any given point during the project.
- B. The CxA will regularly communicate with all members of the commissioning team, keeping them apprised for commissioning progress, and scheduling changes through memos, progress reports, etc.
- C. Two copies of a final summary report will be provided to the engineer of record and owner by the CxA and will include:

1. A brief summary report that includes a list of participants and roles, brief building description, overview of commissioning and testing scope, and a general description of testing and verification methods. For each commissioned system, the report should contain the opinion of the CxA on the adequacy of the following:
 - a. Equipment installation in accordance with contract drawings & specifications
 - b. Functional performance and efficiency
 - c. Equipment documentation
 - d. Operator Training
2. All outstanding non-compliance items shall be specifically listed. Recommendations for improvement to equipment and operations, future actions, recommended commissioning process changes, etc. shall also be listed. Each non-compliance issue shall be referenced to the specific functional test, inspection, trend log, etc., where the deficiency is documented.
3. Also included in the Commissioning Record shall be the issues log, commissioning plan, progress reports, submittal and O&M manual review comments, training record, and functional testing results. Copies of construction checklists and startup reports will typically be provided under separate cover.

D. The CxA will compile a Systems Manual that consists of the following:

1. Space and use descriptions
2. Single line drawings and schematics for major systems (to be provided by the design engineer and/or CTRs, as specified)
3. As-built control drawings and sequences of control (to be provided by the controls contractor).
4. Important schedules and setpoints.
5. Instructions for operation of each piece of equipment for emergencies, seasonal adjustment, startup and shutdown.
6. Instructions for energy savings operations and descriptions of the energy savings strategies in the facility.
7. Recommendation for re-commissioning and regular maintenance of the facility.

3.3 SUBMITTALS

- A. The CxA will review submittals for commissioned equipment for conformance to the Contract Documents as they relate to the commissioning process, to the functional performance of the equipment and adequacy for developing test procedures. This review is intended primarily to aid in the development of functional testing procedures and only secondarily to verify compliance with equipment specifications. The CxA will notify the Owner, CM, or A/E as requested, of items missing or areas that are not in conformance with Contract Documents and which require resubmission.

- B. The CxA may request additional design narratives depending on the completeness of the design intent documentation and sequences for control equipment provided with the Specifications.
- C. These submittals to the CxA do not constitute compliance for O&M manual documentation.

3.4 SYSTEM START-UP AND TESTING

- A. All systems and system components shall be tested by the CTRs and in the presence of the Owner and Design Consultants if desired by the Owner and Design Consultants to demonstrate compliance with specified requirements. To minimize the time of commissioning, contracting, and Design Consultant team members, testing shall be done in seasonal single blocks of time insofar as possible.
- B. The Contractor shall notify the CxA fourteen (14) days prior to scheduled functional performance tests, of the scheduled completion date of the installation verification and prefunctional inspections.
- C. All testing shall be conducted under specified design operating conditions as approved by the CxA and Design Consultants. Where project conditions do not allow for completing functional tests within the allotted schedule, the CxA may elect to defer certain performance tests for a later date. The need for deferred tests will be reviewed by the CxA, CM, A/E, and Owner.
- D. All elements of systems shall be tested to demonstrate that total systems satisfy all requirements of these Specifications. Testing shall be accomplished on a hierarchical basis. Each piece of equipment shall be tested for proper operation, and functionality of safety devices, followed by each system's subsystem, followed by the entire system, followed by any interlocks to other major systems.
- E. All special testing materials and equipment shall be provided by the CTR. This includes, but is not limited to, proprietary equipment, hand-held control parameter/setpoint adjustment tools, water/air flow balancing readout and adjustment tools.
- F. One copy of all factory test reports and records as well as all start-up documentation shall be provided to the CxA promptly following the completion of the report. Reports shall be completed in a timely fashion and shall not be withheld from review by the CxA.
- G. Test Procedure Development and Test Documentation:
 - 1. At least fourteen (14) days prior to startup of the mechanical system, the CTR shall inform the CxA, the Owner's representative and Design Consultants of the intention to start up the systems.

2. Where phased startup of equipment is required based on project conditions, the proposed startup schedule for each sub-system shall be provided (14) days in advance of commencing startup activities.

H. Installation Verification Requirements:

1. All systems and system components shall be checked and verified by the CTR that they have been installed according to the drawings, specifications, and manufacturer's written instructions, and that all connections have been made correctly. Discrepancies shall be corrected and resolved to the satisfaction of the engineer and CxA prior to proceeding any further with pre-functional inspections.
2. Each system of interlocked system components shall be observed and verified by the CTR that it is ready to function as specified. This verification shall occur before formal startup is attempted.
3. Verification of complete and proper installation shall be completed prior to the CxA authorizing functional performance testing.
4. The installation verification shall be documented by the CTR in a written format for each system/piece of equipment as designated by the CxA. Each certificate of readiness shall be dated and initialed by the Contractor and clearly stating any items that are deficient or have not been completed. The protocols for this will be further clarified in the Commissioning Plan.

I. Pre-functional Inspection Requirements:

1. The CxA will provide the inspection forms for each system and equipment.
2. Completion of the pre-functional checklists is the responsibility of the CTR providing the system/equipment.
3. Where work by multiple different CTRs is required for a given system, each CTR will be required to complete the portion of the associated prefunctional checklists for which their contract is responsible. For example, verification that power wiring is complete for mechanical equipment provided by the MC shall be documented by the EC on the appropriate mechanical equipment checklist. Checks by multiple parties shall be documented within a single, comprehensive checklist record.
4. Following completion of prefunctional checklists, completed checklists shall be submitted to the CM for review with the CxA.
5. Prior to the CxA performing the final pre-functional inspection, the CTRs shall check the equipment for proper installation, adjustments, and shall be calibrate the equipment to verify that it is ready to perform as specified.
6. Verification of complete and proper installation shall be completed prior to performing functional performance tests.
7. Deficiencies identified by the CxA shall be corrected fully and completely before requests for re-inspection by the CxA are made. Functional performance testing shall not be scheduled until all non-conformance issues are satisfactorily resolved and documentation of resolution is complete. Refer to the section on Non-Conformance below for further discussion.

J. Functional Performance Testing Requirements:

1. A functional performance test shall be directed on each complete system. Each function shall be demonstrated to the satisfaction of the CxA based on the written test procedure developed by the CxA to demonstrate conformance to the requirements of the Contract Documents.
2. Each functional performance test shall be performed, witnessed and signed off by the CxA. The CxA and the CTRs will perform the functional testing together. Any exceptions to this will be made clear to the Owner as to the reason and justification.
3. The functional performance testing shall be conducted in accordance with prior approved procedures and documented as required.
4. The Contractor shall notify the contracting team, the CxA, and Design Consultants, at least two weeks prior to the date of schedule functional performance tests. The seasonal functional performance test periods shall be scheduled over a single block of days. The schedule of functional performance tests shall be based on the construction completion schedule.

3.5 DOCUMENTATION, NON-CONFORMANCE AND APPROVAL OF TESTS

A. Documentation: The CxA shall witness and document the results of all functional performance tests using the specific forms developed by the CxA for that purpose.

B. Non-Conformance:

1. The CxA will sign-off on the results of the PFIs and functional tests utilizing the appropriate documentation. All deficiencies or non-conformance issues shall be noted and reported to the Owner, CM, and CTRs.
2. Reports of the deficiencies identified will be provided to the project team by the CxA. A log identifying deficiencies for each trade will be provided and periodically updated by the CxA. This log and any accompanying reports or documentation are utilized for the contractor to inform the CxA of the action taken to address the deficiency items and these forms must be returned in a timely manner to the CxA.
3. Corrections of minor deficiencies identified may be made during the tests at the discretion of the CxA. In such cases, the deficiency and resolution will be documented by the CxA. The need for any retesting shall be at the discretion of the CxA.
4. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. However, the CxA will not be pressured into overlooking deficient work or compromising acceptance criteria to satisfy scheduling or cost issues, unless there is an overriding reason to do so at the request of the Owner.
5. Cost of Retesting
 - a. The CTRs shall bear all costs to repeat a pre-functional inspection or functional test.

- b. There shall be no limit on the time required of the CTR to correct items of non-conformance so long as the intent of the contract documents has not been met.
 - c. The time for the CxA to direct any retesting required because a specific prefunctional inspection of start-up test item, reported to have been successfully completed, but determined during functional testing to be faulty, will be back-charged to the appropriate CTR.
 - d. The cost for the CxA to direct or execute a single round of retesting following identification of deficiencies during functional performance testing shall belong to the CxA. Following one round of re-testing, if it is found that the deficiencies previously identified have still not been successfully corrected by the CTR, the time for the CxA to direct any additional re-testing shall be back-charged to the appropriate CTR.
6. The CTR shall respond in writing to the CxA at least as often as commissioning meetings are scheduled concerning the status of each apparent outstanding discrepancy identified during commissioning. Discussion shall cover explanations of any disagreements and proposals for their resolution.
- C. Failure Due to Manufacturer Defect or Improper Installation: If 10% of, or three, whichever is greater, of identical pieces of equipment (size alone does not constitute a difference) fail to perform to the Contract Documents (either mechanically or substantively) due to manufacturing defect or improper installation, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the CxA, CM, A/E or Owner. In such case, the Contractor shall provide the Owner with the following:
1. Within one week of notification from the A/E (via the CxA), the installer or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the CxA or CM within two weeks of the original notice.
 2. Within two weeks of the original notification, the installer or manufacturer shall provide a signed and dated written explanation of the problem, cause of failures, etc., and all proposed solutions, which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation.
 3. The CxA, CM and A/E will determine whether a replacement of all identical units or a repair is acceptable.
 4. Two examples of the proposed solution will be installed by the Contractor and the CxA will be allowed to test the installations for up to one week, upon which the CxA or CM will decide whether to accept the solution.
 5. Upon acceptance, the installer and/or manufacturer shall replace or repair all identical items, at their expense, and extend warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

- D. Approval: The CxA documents each satisfactorily demonstrated functional test.

3.6 OPERATION AND MAINTENANCE MANUALS

A. Standard O&M Manuals

1. The specific content and format requirements for the standard O&M manuals are detailed in the contract documents. Special requirements for the controls contractor and TAB contractor are detailed in the contract documents.
2. Prior to substantial completion, the CxA shall review the O&M manuals, documentation and as-builts for systems that were commissioned to verify compliance with the specifications. The CxA will communicate deficiencies in the manuals to the CTRs, CM, A/E or Owner as requested. Upon successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the CM, A/E and Owner. The CxA also reviews each commissioned equipment's warranty and verifies that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E contract.

3.7 TRAINING OF OWNER PERSONNEL

- A. The CTRs shall be responsible for training coordination, scheduling training sessions with the CM, and for ultimately ensuring that training is completed.
- B. The CxA shall be responsible for overseeing and approving the content and adequacy of the training of the Owner personnel for commissioned equipment. Training sessions shall be attended by the CxA on an as-needed basis.
- C. The CxA shall attend a meeting with the facility manager and lead design engineer to determine the special needs and areas where training would be most valuable. The Owner and CxA shall decide how rigorous the training should be for each piece of commissioned equipment.
- D. In addition to these general requirements, the specific training requirements of Owner's personnel by CTRs, as detailed in the specifications, shall be provided.
- E. Each CTR and vendor responsible for training will submit a written training plan to the CxA, for review and approval prior to training. The plan will cover the following elements:
 1. Equipment (included in training).
 2. Intended audience.
 3. Location of training.
 4. Objectives.
 5. Subjects covered (description, duration of discussion, special methods, etc.).

- 6. Duration of training on each subject.
 - 7. Instructor for each subject and qualifications.
 - 8. Methods (classroom lecture, video, site walk thru, actual demonstrations, etc.).
- F. The CxA will assist the CM, and CTRs in developing an overall training plan and coordinating the schedules with the CM and Owner. The CxA develops criteria for determining that the training was satisfactorily completed, including attending some of the training.

3.8 DEFERRED TESTING

- A. Unforeseen Deferred Tests: If any inspection or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of inspections and functional testing may be delayed upon approval of the CM or Owner. These tests will be conducted in the same manner as the seasonal test as soon as possible. Services of necessary parties shall be negotiated.
- B. Seasonal Testing: During the warranty period, seasonal testing (tests delayed until weather conditions are closer to the system’s design) shall be completed as part of this contract. The CxA shall coordinate this activity. Tests will be executed, documented and deficiencies corrected by the appropriate CTRs, with facilities staff and the CxA witnessing. Any final adjustments to the O&M manuals and as-builts due to the testing will be made. Systems for which seasonal testing is anticipated will be identified in the Commissioning Plan.

3.9 WRITTEN WORK PRODUCTS

- A. The commissioning process generates a number of written work products described in various parts of the specifications. The Commissioning Plan lists all the formal written work products, describes briefly their contents, who is responsible to create them, their due dates, who receives and approves them and the location of the specification to create them. In summary the written products are:

Product	Developed By
1. Final Commissioning Plan	CxA
2. Commissioning Schedules	CxA, CM and CTRs
3. Equipment Documentation Submittals	CTRs
4. Sequence Clarifications	A/E and CTRs as needed
5. Pre-Functional Inspection Forms	CxA
6. Pre-Functional Inspections	CxA and CTRs
7. Startup and Initial Checkout Plans	CTRs
8. Startup and Factory Test Reports	CTRs
9. Final TAB Report	MC

- | | | |
|-----|-------------------------------|------------------|
| 10. | Commissioning Progress Record | CxA |
| 11. | Deficiency Reports | CxA |
| 12. | Functional Test Procedures | CxA |
| 13. | O&M Manuals | CTRs |
| 14. | Commissioning Record | CxA |
| 15. | Overall Training Plans | CxA, CM and CTRs |
| 16. | Final Commissioning Report | CxA |

3.10 SUBSTANTIAL COMPLETION

- A. CTRs shall prepare and submit a list of completed and open commissioning activities including schedules for completion of open items to CxA prior to requesting approval for Substantial Completion.
 - 1. CxA shall review and provide comments to CM and A/E.

3.11 FINAL ACCEPTANCE

- A. CTRs shall obtain and submit certification from CxA that commissioning process is complete.
- B. When Contractor considers that construction-phase commissioning process, or a portion thereof which Owner agrees to accept separately, is complete, Contractor shall prepare and submit to Owner and Commissioning Authority through Architect a comprehensive list of items to be completed or corrected. Failure to include an item on such list does not alter Contractor's responsibility to complete commissioning process.

END OF SECTION 019113

SECTION 02 33 13 - UNDERGROUND UTILITY LOCATOR SERVICE

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes:
 - 1. Requirements and standards for underground utility location services to be completed prior to commencement of construction.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Contract Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.3 REFERENCES

- A. American Society of Civil Engineers, CI/ASCE 38-02, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."
- B. American Public Works Association, Uniform Color Code."

1.4 DEFINITIONS

- A. Utility Quality Levels:
 - 1. Level A: Precise horizontal and vertical location of utilities obtained by the actual exposure (or verification of previously exposed and surveyed utilities) and subsequent measurement of subsurface utilities, usually at a specific point. Minimally intrusive excavation equipment is typically used to minimize the potential for utility damage. A precise horizontal and vertical location, as well as other utility attributes, is shown on plan documents. Accuracy is typically set to 15-mm vertical and to applicable horizontal survey and mapping accuracy as defined or expected by the project owner.
 - 2. Level B: Information obtained through the application of appropriate surface geophysical methods to determine the existence and approximate horizontal position of subsurface utilities. Quality level B data should be reproducible by surface geophysics at any point of their depiction. This information is surveyed to applicable tolerances defined by the project and reduced onto plan documents.

1.5 DESCRIPTION

- A. Retain an independent utility locator service company with a minimum of five (5) years experience to field locate, mark, and stakeout existing underground utilities and service connections.

1. Level B locator service shall be performed in all project areas where excavations, regrading of the ground surface, and penetrations of the ground surface are to be performed.
 - a. Contractor shall include a minimum of 16 hours of Level A locator service to locate underground utilities as identified on the contract drawings or as identified during the Level B investigation that require more specific location, invert elevation, size, etc. Level A investigation shall only be performed at locations where shown or as directed.
 - b. In heavy metal areas, such as near perimeter fences, ground penetrating radar shall be used to determine the location of underground utilities. The use of equipment that induce a tracing signal along the utility path (such as a Metrotech unit) can cause false readings, shall not be used within five feet of fences.
2. The Level A investigation shall be performed as follows:
 - a. Hand excavation may be performed for depths of three feet or less.
 - b. Vacuum excavation shall be performed at depths greater than three feet.
 - c. All excavation test pits shall be backfilled by close of business that day.
3. Support and protect all utilities and service connections to remain in place.
4. The locator service shall field locate and mark underground utilities and service connections prior to excavation.
5. The contractor shall be responsible for coordinating the extent of the areas of subsurface investigation required to locate all underground utilities and service connections in the areas of excavation.
6. All costs associated with the repair of underground utilities and service connections hit/damaged during the investigative work shall be the responsibility of the contractor.
7. Utility location services shall be in accordance with the provisions of CIASCE 38-02, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."

1.6 SUBMITTALS

- A. Submit detailed experience and qualifications description of underground utility locator service. Experience and qualifications package should include a description of the types of utility locator equipment and experience that can be provided.
- B. Investigative Report:

1. Submit detailed written report and scaled drawings of the subsurface investigation, documenting all underground utilities and service connections located and identified.
 - a. All documentation shall be referenced to existing data (horizontal and vertical) previously established.
 - b. Provide three (3) paper copies and one (1) electronic copy of detailed written report and drawings.
 - c. Submit Investigative Report at least two weeks prior to advancing construction within the scheduled areas of excavation within the project site.

1.4 COORDINATION AND SCHEDULE

- A. Coordinate the Work to determine the extent of the areas of subsurface investigation required to locate all underground utilities and service connections in the areas of excavation.
- B. Coordinate the Work with the Director's Representative to minimize utility disruptions and facility operations. Provide a schedule for the Work required to the Director's Representative for approval. Upon approval of the schedule, notify the Director's Representative a minimum of three (3) working days prior to performing the Work.
- C. Within the areas of excavation, all underground utilities and service connections shall be field located and their locations marked at least two (2) weeks prior to the performance of the required excavation work.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 WORK AREAS AND PERFORMANCE

- A. If any underground utilities and service connections are hit or damaged during the work, immediately inform the Owner and Engineer for directions on how to proceed.
- B. The utility locator service investigative work, field location and marking of underground utilities and service connections and submission of the investigative report must be completed before any excavation work can begin.
- C. Provide subsurface investigation information, detailed written report and drawings of the subsurface investigation, documenting all underground utilities and service connections located and identified, prior to the performance of the required excavation work.

- D. If during the Level B investigations, unknown underground utilities are discovered, the Engineer shall be notified as soon as possible or before the close of that business day.
- E. Field Marking of underground utilities shall follow the American Public Works Association (APWA) uniform color code:
 - 1. White: Proposed Excavation.
 - 2. Pink: Temporary Survey Markings.
 - 3. Red: Electric power lines, cables, conduit and lighting cables.
 - 4. Yellow: Gas, oil, steam, petroleum and gaseous material.
 - 5. Orange: Communications, alarm, signal lines, cables or conduit.
 - 6. Blue: Potable water.
 - 7. Purple: Reclaimed water, irrigation and slurry lines.
 - 8. Green: Sewer and drain lines.
- F. The Owner or Engineer may limit or restrict scheduling of the utility locator service based upon project progress.

END OF SECTION 02 33 13