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PROJECT MANUAL

ISSUED FOR MyMarketPlace

[Redacted]

 **TETRA TECH**  
240 Continental Drive, Suite 200  
Newark, Delaware 19713  
phone: 302.738.7551  
fax: 302.454.5989

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**Delaware Technical Community  
College**

**ELEVATOR REPLACEMENT &  
UPGRADES**

**DELAWARE TECHNICAL  
COMMUNITY COLLEGE**

**EDUCATION TECHNOLOGY  
BUILDING - TERRY CAMPUS**

**DOVER, DELAWARE**

[Redacted]

200-35157-18001  
November 17, 2017

**NOT FOR BIDDING PURPOSES**

**ROOF REPLACEMENT  
AT THE ETB BUILDING  
DELAWARE TECHNICAL COMMUNITY COLLEGE  
TERRY CAMPUS  
DOVER, DELAWARE**

PROJECT TEAM

OWNER'S REPRESENTATIVE: Ray Parsons  
Director of Administrative Services  
Delaware Technical Community College  
Terry Campus  
100 Campus Drive  
Dover, Delaware 19904

OWNER: Delaware Technical Community College  
100 Campus Drive  
Dover, DE 19904

ARCHITECT/ENGINEER: Tetra Tech, Inc.  
240 Continental Drive  
Suite 200  
Newark, DE 19713  
Phone: 302-738-7551  
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## INVITATION TO BID

Sealed bids for Delaware Technical Community College's "Terry Campus, ETB Building **Roof Replacement**" Bid No. DTCC17005-ETBRF, will be received by the Delaware Technical & Community College's – Terry Campus, ETB Building, Room #741, 100 Campus Drive, Dover, Delaware, **until 2:00 p.m. local time on, January 11, 2018** at which time they will be publicly opened and read aloud in the Conference Room. Bidder bears the risk of late delivery. Any bids received the stated time will be returned unopened.

Project includes the complete removal and replacement of existing roofing membrane as well as additional roofing related accessories.

Attention is called to construction schedule as detailed in the Bid Documents.

A **MANDATORY** Pre-Bid Meeting will be held on December 12, 2017, at 2:00 pm at the Terry Campus, ETB Building in Room # 741 for the purpose of establishing the listing of subcontractors and to answer questions. Representatives of each party to any Joint Ventures must attend this meeting. **ATTENDANCE OF THIS MEETING IS A PREREQUISITE FOR BIDDING ON THIS CONTRACT.**

Sealed bids shall be addressed to the Delaware Technical Community College, Terry Campus, ETB Building, 100 Campus Drive, Dover DE 19904. The outer envelope should clearly indicate: "BID NUMBER DTCC17005-ETBRF, Terry Campus, **ETB Building Roof Replacement** – SEALED BID DO NOT OPEN."

The Contract Documents (specifications and drawings) may be purchased at Tetra Tech Architects and Engineers, 240 Continental Drive, Suite 200, Newark, DE 19713. The contract documents are \$50 per set, nonrefundable. Make checks out to Tetra Tech.

Bidders will not be subject to discrimination on the basis of race, creed, color, sex, sexual orientation, gender identity or national origin in consideration of this award, and Minority Business Enterprises, Disadvantaged Business Enterprises, Women-Owned Business Enterprises and Veteran-Owned Business Enterprises will be afforded full opportunity to submit bids on this contract. Each bid must be accompanied by a bid security equivalent to ten percent of the bid amount and all additive alternates. The successful bidder must post a performance bond and payment bond in a sum equal to 100 percent of the contract price upon execution of the contract. The Owner reserves the right to reject any or all bids and to waive any informalities therein. The Owner may extend the time and place for the opening of the bids from that described in the advertisement, with not less than two calendar days notice by certified delivery, facsimile machine or other electronic means to those bidders receiving plans.



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INSTRUCTION TO BIDDERS

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**NOT FOR BIDDING PURPOSES**

**ARTICLE 1: GENERAL**

## 1.1 DEFINITIONS

1.1.1 Whenever the following terms are used, their intent and meaning shall be interpreted as follows:

1.2 STATE: The State of Delaware.

1.3 AGENCY: Contracting State Agency as noted on cover sheet.

1.4 DESIGNATED OFFICIAL: The agent authorized to act for the Agency.

1.5 BIDDING DOCUMENTS: Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bid, Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the Bid Form (including the Non-collusion Statement), and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, as well as the Drawings, Specifications (Project Manual) and all Addenda issued prior to execution of the Contract.

1.6 CONTRACT DOCUMENTS: The Contract Documents consist of the, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the form of agreement between the Owner and the Contractor, Drawings (if any), Specifications (Project Manual), and all addenda.

1.7 AGREEMENT: The form of the Agreement shall be AIA Document A101, Standard Form of Agreement between Owner and Contractor where the basis of payment is a STIPULATED SUM. In the case of conflict between the instructions contained therein and the General Requirements herein, these General Requirements shall prevail.

1.8 GENERAL REQUIREMENTS (or CONDITIONS): General Requirements (or conditions) are instructions pertaining to the Bidding Documents and to contracts in general. They contain, in summary, requirements of laws of the State; policies of the Agency and instructions to bidders.

1.9 SPECIAL PROVISIONS: Special Provisions are specific conditions or requirements peculiar to the bidding documents and to the contract under consideration and are supplemental to the General Requirements. Should the Special Provisions conflict with the General Requirements, the Special Provisions shall prevail.

1.10 ADDENDA: Written or graphic instruments issued by the Owner/Architect prior to the execution of the contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.11 BIDDER OR VENDOR: A person or entity who formally submits a Bid for the material or Work contemplated, acting directly or through a duly authorized representative who meets the requirements set forth in the Bidding Documents.

- 1.12 SUB-BIDDER: A person or entity who submits a Bid to a Bidder for materials or labor, or both for a portion of the Work.
- 1.13 BID: A complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- 1.14 BASE BID: The sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids (if any are required to be stated in the bid).
- 1.15 ALTERNATE BID (or ALTERNATE): An amount stated in the Bid, where applicable, 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.
- 1.16 UNIT PRICE: An amount stated in the Bid, where applicable, as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- 1.17 SURETY: The corporate body which is bound with and for the Contract, or which is liable, and which engages to be responsible for the Contractor's payments of all debts pertaining to and for his acceptable performance of the Work for which he has contracted.
- 1.18 BIDDER'S DEPOSIT: The security designated in the Bid to be furnished by the Bidder as a guaranty of good faith to enter into a contract with the Agency if the Work to be performed or the material or equipment to be furnished is awarded to him.
- 1.19 CONTRACT: The written agreement covering the furnishing and delivery of material or work to be performed.
- 1.20 CONTRACTOR: Any individual, firm or corporation with whom a contract is made by the Agency.
- 1.21 SUBCONTRACTOR: An individual, partnership or corporation which has a direct contract with a contractor to furnish labor and materials at the job site, or to perform construction labor and furnish material in connection with such labor at the job site.
- 1.22 CONTRACT BOND: The approved form of security furnished by the contractor and his surety as a guaranty of good faith on the part of the contractor to execute the work in accordance with the terms of the contract.

**ARTICLE 2: BIDDER'S REPRESENTATIONS**

**2.1 PRE-BID MEETING**

- 2.1.1 A pre-bid meeting for this project will be held at the time and place designated. Attendance at this meeting is a pre-requisite for submitting a Bid, unless this requirement is specifically waived elsewhere in the Bid Documents.

- 2.2 By submitting a Bid, the Bidder represents that:
- 2.2.1 The Bidder has read and understands the Bidding Documents and that the Bid is made in accordance therewith.
- 2.2.2 The Bidder has visited the site, become familiar with existing conditions under which the Work is to be performed, and has correlated the Bidder's his personal observations with the requirements of the proposed Contract Documents.
- 2.2.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.
- 2.3 JOINT VENTURE REQUIREMENTS
- 2.3.1 For Public Works Contracts, each Joint Venturer shall be qualified and capable to complete the Work with their own forces.
- 2.3.2 Included with the Bid submission, and as a requirement to bid, a copy of the executed Joint Venture Agreement shall be submitted and signed by all Joint Venturers involved.
- 2.3.3 All required Bid Bonds, Performance Bonds, Material and Labor Payment Bonds must be executed by both Joint Venturers and be placed in both of their names.
- 2.3.4 All required insurance certificates shall name both Joint Venturers.
- 2.3.5 Both Joint Venturers shall sign the Bid Form and shall submit a copy of a valid Delaware Business License with their Bid.
- 2.3.6 Both Joint Venturers shall include their Federal E.I. Number with the Bid.
- 2.3.7 In the event of a mandatory Pre-bid Meeting, each Joint Venturer shall have a representative in attendance.
- 2.3.8 Due to exceptional circumstances and for good cause shown, one or more of these provisions may be waived at the discretion of the State.
- 2.4 ASSIGNMENT OF ANTITRUST CLAIMS
- 2.4.1 As consideration for the award and execution by the Owner of this contract, the Contractor hereby grants, conveys, sells, assigns and transfers to the State of Delaware all of its right, title and interests in and to all known or unknown causes of action it presently has or may now or hereafter acquire under the antitrust laws of the United States and the State of Delaware, relating to the particular goods or services purchased or acquired by the Owner pursuant to this contract.

### ARTICLE 3: BIDDING DOCUMENTS

#### 3.1 COPIES OF BID DOCUMENTS

- 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the Architectural/Engineering firm designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein.
- 3.1.2 Bidders shall use complete sets of Bidding Documents for preparation of Bids. The issuing Agency nor the Architect assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 3.1.3 Any errors, inconsistencies or omissions discovered shall be reported to the Architect immediately.
- 3.1.4 The Agency 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

- 3.2.1 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 report any errors, inconsistencies, or ambiguities discovered to the Architect.
- 3.2.2 Bidders or Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect at least seven days prior to the date for receipt of Bids. Interpretations, corrections and changes to the Bidding Documents will be made by written Addendum. Interpretations, corrections, or changes to the Bidding Documents made in any other manner shall not be binding.
- 3.2.3 The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specification compliance will be the responsibility of the Bidder.
- 3.2.4 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all permits, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.
- 3.2.5 The Owner will bear the costs for all impact and user fees associated with the project.

### 3.3 SUBSTITUTIONS

- 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of quality, required function, dimension, and appearance to be met by any proposed substitution. The specification of a particular manufacturer or model number is not intended to be proprietary in any way. Substitutions of products for those named will be considered, providing that the Vendor certifies that the function, quality, and performance characteristics of the material offered is equal or superior to that specified. It

shall be the Bidder's responsibility to assure that the proposed substitution will not affect the intent of the design, and to make any installation modifications required to accommodate the substitution.

- 3.3.2 Requests for substitutions shall be made in writing to the Architect at least ten days prior to the date of the Bid Opening. Such requests shall include a complete description of the proposed substitution, drawings, performance and test data, explanation of required installation modifications due the substitution, and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval shall be final. The Architect is to notify Owner prior to any approvals.
- 3.3.3 If the Architect approves a substitution prior to the receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding.
- 3.3.4 The Architect shall have no obligation to consider any substitutions after the Contract award.
- 3.4 ADDENDA
- 3.4.1 Addenda will be mailed or delivered to all who are known by the Architect to have received a complete set of the Bidding Documents.

#### INSTRUCTIONS TO BIDDERS

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- 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- 3.4.3 No Addenda will be issued later than 4 days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which extends the time or changes the location for the opening of bids.
- 3.4.4 Each bidder shall ascertain prior to submitting his Bid that they have received all Addenda issued, and shall acknowledge their receipt in their Bid in the appropriate space. Not acknowledging an issued Addenda could be grounds for determining a bid to be non-responsive.

#### ARTICLE 4 BIDDING PROCEDURES

##### 4.1 PREPARATION OF BIDS

- 4.1.1 Submit the bids on the Bid Forms included with the Bidding Documents.
- 4.1.2 Submit the original Bid Form for each bid. Bid Forms may be removed from the project manual for this purpose.
- 4.1.3 Execute all blanks on the Bid Form in a non-erasable medium (typewriter or manually in ink).

#### INSTRUCTION TO BIDDERS

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- 4.1.4 Where so indicated by the makeup on the Bid Form, express sums in both words and figures, in case of discrepancy between the two, the written amount shall govern.
- 4.1.5 Interlineations, alterations or erasures must be initialed by the signer of the Bid.
- 4.1.6 BID ALL REQUESTED ALTERNATES AND UNIT PRICES, IF ANY. If there is no change in the Base Bid for an Alternate, enter “No Change”. The Contractor is responsible for verifying that they have received all addenda issued during the bidding period. Work required by Addenda shall automatically become part of the Contract.
- 4.1.7 Make no additional stipulations on the Bid Form and do not qualify the Bid in any other manner.
- 4.1.8 Each copy of the Bid shall include the legal name of the Bidder and a statement whether the Bidder is a sole proprietor, a partnership, a corporation, or any legal entity, and each 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 agent's authority to bind the Bidder.
- 4.1.9 Bidder shall complete the Non-Collusion statement form included with the Bid Forms and include it with their Bid.
- 4.1.10 In the construction of all Public Works projects for the State of Delaware or any agency thereof, preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State.
- 4.1.11 Each bidder shall include in their bid a copy of a valid Delaware Business License.’
- 4.1.12 Each bidder shall include signed Affidavit(s) for the Bidder and each listed Subcontractor certifying compliance with OMB Regulation 4104- “Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on “Large Public Works Projects.” “Large Public Works” is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.
- 4.2 BID SECURITY
- 4.2.1 All bids shall be accompanied by a deposit of either a good and sufficient bond to the agency for the benefit of the agency, with corporate surety authorized to do business in this State, the form of the bond and the surety to be approved by the agency, or a security of the bidder assigned to the agency, for a sum equal to at least 10% of the bid plus all add alternates, or in lieu of the bid bond a security deposit in the form of a certified check, bank treasurer’s check, cashier’s check, money order, or other prior approved secured deposit assigned to the State. The bid bond need not be for a specific sum, but may be stated to be for a sum equal to 10% of the bid plus all add alternates to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10% of the bid. The Bid Bond form used shall be the standard OMB form (attached).



4.2.2 The Agency has the right to retain the bid security of Bidders to whom an award is being considered until either a formal contract has been executed and bonds have been furnished or the specified time has elapsed so the Bids may be withdrawn or all Bids have been rejected.

4.2.3 In the event of any successful Bidder refusing or neglecting to execute a formal contract and bond within 20 days of the awarding of the contract, the bid bond or security deposited by the successful bidder shall be forfeited.

#### 4.3 SUBCONTRACTOR LIST

4.3.1 As required by Delaware Code, Title 29, section 6962(d)(10)b, each Bidder shall submit with their Bid a completed List of Sub-Contractors included with the Bid Form. NAME ONLY ONE SUBCONTRACTOR FOR EACH TRADE. A Bid will be considered non-responsive unless the completed list is included.

4.3.2 Provide the Name and Address for each listed subcontractor. Addresses by City, Town or Locality, plus State, will be acceptable.

4.3.3 It is the responsibility of the Contractor to ensure that their Subcontractors are in compliance with the provisions of this law. Also, if a Contractor elects to list themselves as a Subcontractor for any category, they must specifically name themselves on the Bid Form and be able to document their capability to act as Subcontractor in that category in accordance with this law.

#### 4.4 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

4.4.1 During the performance of this contract, the contractor agrees as follows:

A. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, creed, sex, color, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.

B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, sex, color, sexual orientation, gender identity or national origin."

#### 4.5 PREVAILING WAGE REQUIREMENT

- 4.5.1 Wage Provisions: For renovation and new construction projects whose costs exceed the thresholds contained in Delaware Code, Title 29, Section 6960, the minimum wage rates for various classes of laborers and mechanics shall be as determined by the Department of Labor, Division of Industrial Affairs of the State of Delaware.
- 4.5.2 The employer shall pay all mechanics and labors employed directly upon the site of work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics.
- 4.5.3 The scale of the wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work.
- 4.5.4 Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.
- 4.6 SUBMISSION OF BIDS
- 4.6.1 Enclose the Bid, the Bid Security, and any other documents required to be submitted with the Bid in a sealed opaque envelope. Address the envelope to the party receiving the Bids. Identify with the project name, project number, and the Bidder's name and address. If the Bid is sent by mail, enclose the sealed envelope in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof. The State is not responsible for the opening of bids prior to bid opening date and time that are not properly marked.
- 4.6.2 Deposit Bids at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bids. Bids received after the time and date for receipt of bids will be marked "LATE BID" and returned.
- 4.6.3 Bidder assumes full responsibility for timely delivery at location designated for receipt of bids.
- 4.6.4 Oral, telephonic or telegraphic bids are invalid and will not receive consideration.
- 4.6.5 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids, provided that they are then fully in compliance with these Instructions to Bidders.
- 4.7 MODIFICATION OR WITHDRAW OF BIDS
- 4.7.1 Prior to the closing date for receipt of Bids, a Bidder may withdraw a Bid by personal request and by showing proper identification to the Architect. A request for withdraw by letter or fax, if the Architect is notified in writing prior to receipt of fax, is acceptable. A fax directing a modification in the bid price will render the Bid informal, causing it to be ineligible for consideration of award. Telephone directives for modification of the bid price shall not be permitted and will have no bearing on the submitted proposal in any manner.

- 4.7.2 Bidders submitting Bids that are late shall be notified as soon as practicable and the bid shall be returned.
- 4.7.3 A Bid may not be modified, withdrawn or canceled by the Bidder during a thirty (30) day period following the time and date designated for the receipt and opening of Bids, and Bidder so agrees in submitting their Bid. Bids shall be binding for 30 days after the date of the Bid opening.

## **ARTICLE 5: CONSIDERATION OF BIDS**

### **5.1 OPENING/REJECTION OF BIDS**

- 5.1.1 Unless otherwise stated, Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids will be made available to Bidders.
- 5.1.2 The Agency shall have the right to reject any and all Bids, a Bid not accompanied by a required Bid Security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.
- 5.1.3 If the Bids are rejected, it will be done within thirty (30) calendar day of the Bid opening.

### **5.2 COMPARISON OF BIDS**

- 5.2.1 After the Bids have been opened and read the bid prices will be compared and the result of such comparisons will be made available to the public at a later date. Comparisons of the Bids may be based on the Base Bid plus desired Alternates. The Agency shall have the right to accept Alternates in any order or combination.
- 5.2.2 The Agency reserves the right to waive technicalities, to reject any or all Bids, or any portion thereof, to advertise for new Bids, to proceed to do the Work otherwise, or to abandon the Work, if in the judgment of the Agency or its agent(s), it is in the best interest of the State.
- 5.2.3 An increase or decrease in the quantity for any item is not sufficient grounds for an increase or decrease in the Unit Price.
- 5.2.4 The prices quoted are to be those for which the material will be furnished F.O.B. Job Site and include all charges that may be imposed during the period of the Contract.
- 5.2.5 No qualifying letter or statements in or attached to the Bid, or separate discounts will be considered in determining the low Bid except as may be otherwise herein noted. Cash or separate discounts should be computed and incorporated into Unit Bid Price(s).

### **5.3 DISQUALIFICATION OF BIDDERS**

- 5.3.1 An agency shall determine that each Bidder on any Public Works Contract is responsible before awarding the Contract. Factors to be considered in determining the responsibility of a Bidder include:

- A. The Bidder's financial, physical, personnel or other resources including Subcontracts;
  - B. The Bidder's record of performance on past public or private construction projects, including, but not limited to, defaults and/or final adjudication or admission of violations of the Prevailing Wage Laws in Delaware or any other state;
  - C. The Bidder's written safety plan;
  - D. Whether the Bidder is qualified legally to contract with the State;
  - E. Whether the Bidder supplied all necessary information concerning its responsibility; and,
  - F. Any other specific criteria for a particular procurement which an agency may establish; provided however, that, the criteria be set forth in the Invitation to Bid and is otherwise in conformity with State and/or Federal law.
- 5.3.2 If an agency determines that a Bidder is nonresponsive and/or nonresponsible, the determination shall be in writing and set forth the basis for the determination. A copy of the determination shall be sent to the affected Bidder within five (5) working days of said determination.
- 5.3.3 In addition, any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and the rejection of their Bid or Bids.
- 5.3.3.1 More than one Bid for the same Contract from an individual, firm or corporation under the same or different names.
  - 5.3.3.2 Evidence of collusion among Bidders.
  - 5.3.3.3 Unsatisfactory performance record as evidenced by past experience.
  - 5.3.3.4 If the Unit Prices are obviously unbalanced either in excess or below reasonable cost analysis values.
  - 5.3.3.5 If there are any unauthorized additions, interlineation, conditional or alternate bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite or ambiguous as to its meaning.
  - 5.3.3.6 If the Bid is not accompanied by the required Bid Security and other data required by the Bidding Documents.
  - 5.3.3.7 If any exceptions or qualifications of the Bid are noted on the Bid Form.
- 5.4 ACCEPTANCE OF BID AND AWARD OF CONTRACT
- 5.4.1 A formal Contract shall be executed with the successful Bidder within twenty (20) calendar days after the award of the Contract.

- 5.4.2 Per Section 6962(d)(13) a., Title 29, Delaware Code, “The contracting agency shall award any public works contract within thirty (30) days of the bid opening to the lowest responsive and responsible Bidder, unless the Agency elects to award on the basis of best value, in which case the election to award on the basis of best value shall be stated in the Invitation To Bid.”
- 5.4.3 Each Bid on any Public Works Contract must be deemed responsive by the Agency to be considered for award. A responsive Bid shall conform in all material respects to the requirements and criteria set forth in the Contract Documents and specifications.
- 5.4.4 The Agency shall have the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid, plus accepted Alternates.
- 5.4.5 The successful Bidder shall execute a formal contract, submit the required Insurance Certificate, and furnish good and sufficient bonds, unless specifically waived in the General Requirements, in accordance with the General Requirements, within twenty (20) days of official notice of contract award. The successful Bidder shall provide two business days prior to contract execution, copies of the Employer Drug Testing Program for the Bidder and all listed Subcontractors. Bonds shall be for the benefit of the Agency with surety in the amount of 100% of the total contract award. Said Bonds shall be conditioned upon the faithful performance of the contract. Bonds shall remain in affect for period of one year after the date of substantial completion.
- 5.4.6 If the successful Bidder fails to execute the required Contract, Bond and all required information, as aforesaid, within twenty (20) calendar days after the date of official Notice of the Award of the Contract, their Bid guaranty shall immediately be taken and become the property of the State for the benefit of the Agency as liquidated damages, and not as a forfeiture or as a penalty. Award will then be made to the next lowest qualified Bidder of the Work or readvertised as the Agency may decide.
- 5.4.7 Each bidder shall supply with its bid its taxpayer identification number (i.e., federal employer identification number or social security number) and a copy of its Delaware business license, and should the vendor be awarded a contract, such vendor shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.
- 5.4.8 The Bid Security shall be returned to the successful Bidder upon the execution of the formal contract. The Bid Securities of unsuccessful bidders shall be returned within thirty (30) calendar days after the opening of the Bids.

**ARTICLE 6: POST-BID INFORMATION**

6.1 CONTRACTOR'S QUALIFICATION STATEMENT

6.1.1 Bidders to whom award of a Contract is under consideration shall, if requested by the Agency, submit a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a statement has been previously required and submitted.

6.2 BUSINESS DESIGNATION FORM

6.2.1 Successful bidder shall be required to accurately complete an Office of Management and Budget Business Designation Form for Subcontractors.

**ARTICLE 7: PERFORMANCE BOND AND PAYMENT BOND**

7.1 BOND REQUIREMENTS

7.1.1 The cost of furnishing the required Bonds, that are stipulated in the Bidding Documents, shall be included in the Bid.

7.1.2 If the Bidder is required by the Agency to secure a bond from other than the Bidder's usual sources, changes in cost will be adjusted as provide in the Contract Documents.

7.1.3 The Performance and Payment Bond forms used shall be the standard OMB forms (attached).

7.2 TIME OF DELIVERY AND FORM OF BONDS

7.2.1 The bonds shall be dated on or after the date of the Contract.

7.2.2 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix a certified and current copy of the power of attorney.

**ARTICLE 8: FORM OF AGREEMENT BETWEEN AGENCY AND CONTRACTOR**

8.1 Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum.

END OF SECTION

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SECTION 00 22 14

ADDITIONAL INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.01 GENERAL PROVISIONS

- A. The provisions of Division 00 herein shall govern in any conflict between Division 00 and other provisions of this Project Manual.

1.02 QUALIFICATION OF BIDDERS

- A. The Prime Contractor for this project shall be either an Electrical or General Contractor whose qualifications and reputation are satisfactory to the Owner and Engineer.
- B. The Prime Contractor shall be a Contractor who holds a General, Electrical or Fire Alarm Installer license in New Castle County, Delaware and the State of Delaware at the time that bids are taken for this project.
- C. The Prime Contractor shall perform at least 10% of the total contract with their own forces, exclusive of general condition items, the purchasing of equipment or material, administrative costs, overhead and profit.

1.03 DEFINITIONS

- A. OWNER as defined herein is the Delaware Technical Community College.
- B. TENANT as defined herein is Delaware Technical Community College.
- C. ARCHITECT/ENGINEER as defined wherever in Project Manual is Tetra Tech Inc., 240 Continental Drive, Suite 200, Newark, DE 19713. Telephone: 302-738-7551, Fax 302-454-5989, or email: Tim.Skibicki@tetrattech.com

1.04 BID FORM

- A. All names must be typed or printed below the signature.
- B. The Bid shall contain an acknowledgment of receipt of all Addenda by number and date.

1.05 CONTRACT TIME

- A. The timing of work to be performed under this contract is critical and set forth in detail in the Contract Documents.

1.06 REPRESENTATION OF BIDDERS



- A. Before submitting their Bid, each Bidder shall thoroughly review Contract Documents prior to visiting site, take Contract Documents to site during scheduled building tour, and thoroughly explore, to any extent necessary, existing conditions as relating to fulfilling the requirements of this Contract.
- B. Bidders requiring access to the facility must make prior arrangements and be prepared to identify themselves satisfactorily (picture ID) before obtaining access.
- C. If discrepancies are noted between requirements of Contract Documents and existing conditions or ambiguity, inconsistency or error are determined in Contract Documents, Bidder shall so indicate to Architect/Engineer prior to seven (7) days before Bid Date and clarification will be issued in the form of Addenda.
- D. The submission of a bid will constitute an incontrovertible representation by the Bidder that they have complied with every requirement of Representation of Bidders Article and that their bid is based upon the contents of the Contract Documents without exception.

#### 1.07 INTERPRETATIONS

- A. All questions about the meaning or intent of the Contract Documents or requests for substitutions shall be submitted to the Architect/ Engineer in writing and shall be in Architect/ Engineer's office seven (7) days before Bid Date.
- B. Replies will be in the form of numbered and dated Addenda mailed or delivered to all parties recorded by Architect/ Engineer as having received the Contract Documents.
- C. Only the contents of formal written Addenda will be binding. Oral or other interpretations or clarifications will be without legal validity.
- D. Prior to submitting their bid, each Bidder shall ascertain that they have received all Addenda issued and shall acknowledge receipt in their bid.

#### 1.08 SUBSTITUTIONS

- A. Bids shall be submitted only on the basis of materials, products or equipment specified in the specifications, on the drawings, or as named by Addendum issued prior to bid date and pursuant to requests for approval.
- B. Materials, products or equipment specified in these specifications or on the drawings, are specified for the purpose of establishing a standard of quality, cost, design and function. It is not the intent to limit the acceptance of materials, products or equipment specified but rather to name or describe a material, product or piece of equipment as the absolute minimum standard that is desired and acceptable. Where proprietary names are used, whether or not followed by the words "or approved substitute" or "or equivalent equal", they shall be subject to equals only as approved by the Architect/ Engineer prior to the date for receipt of bids.
- C. No substitutions shall be considered unless written requests are submitted to the Architect/ Engineer for approval ten (10) days prior to the date for receipt of bids. Such requests shall be from a Prime Contractor and shall include a complete description of the proposed substitute, documentary proof of equal or superior quality, drawings or catalog cuts clearly

marking the models or lines, sample of materials, performance and test data, jobs completed locally within the past five years and any other data or information necessary for a complete evaluation.

- D. Approved substitutions will be set forth by Addenda to alert all bidders.
- E. The contract documents have been prepared to provide for the incorporation of at least one of the specified items or assemblies of every category of materials, products or pieces of equipment. In the event that incorporation of a substituted item or assembly into the work will require revisions or additions to the contractual requirements of the Prime Contractor or any of their Sub-Contractors, the Prime Contractor or Sub-Contractor electing to use such item or assembly shall bear the cost of such revisions or additions to the work of all trades at no change in the contract sum.
- F. If no prospective bidder has elected to obtain approval by the means described above, the Owner has no obligation, after award of contract, to consider any brand other than those named in the contract documents.
- G. A substitution submitted by a Contractor or Sub-Contractor after the award of contract, for reason that a product is not available will not be permitted unless proof is submitted that a firm order was placed within 30 days after Notice of Award to the Prime Contractor. If an order was placed as stated, and the product is not available, the Contractor shall have the substitute product approved by the Owner and Architect/Engineer.

1.09 WAGE RATES

- A. The schedule of prevailing wage rates is included in the Contract Documents under Section 00 73 46.

1.10 START OF WORK

- A. The time of completion of this Contract has been established on the basis that the Contractor shall start work within ten (10) days following receipt of an official State of Delaware Purchase Order and it is agreed that work shall accordingly be commenced on that day.

1.11 TABLES OF CONTENTS

- A. TABLE OF CONTENTS are included with this Project Manual for reference only and are not part thereof.
- B. The Architect/ Engineer does not guarantee the accuracy of the Table of Contents or the inclusion or exclusion of any category of the work.
- C. In case of discrepancy between Table of Contents and the documents bound herein, the bound documents will govern.

1.12 COST OF CONTRACT DOCUMENTS

- A. Refer to ADVERTISEMENT FOR BIDS herein.

- B. Documents may be obtained at the offices of the Architect/Engineer Tetra Tech, 240 Continental Drive, Suite 200, Newark, DE 19713, upon payment of a non-refundable deposit of \$50.00. Checks shall be made payable Tetra Tech, Inc.
- C. Documents may be examined at the offices of the Architect/Engineer, Tetra Tech Inc., 240 Continental Drive, Suite 200, Newark, DE 19713.

END OF SECTION

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SECTION 00 31 13

PROJECT SCHEDULE

1.1 PROJECT SCHEDULE

- A. This Document with its referenced attachments is part of the Contract Documents. The start and finish dates shown on the schedule are subject to change, but the construction duration days are a requirement of the project. The schedule duration days are business days.
- B. Available Project information includes the following:
  - 1. Project Schedule (attached).
- C. Project schedule includes construction milestones as appended to this Document. Related Requirements:
  - 1. Section 011000 "Summary" for phased construction requirements.
  - 2. Section 013200 "Construction Progress Documentation" for Contractor's construction schedule requirements.

END OF SECTION

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**ROOF REPLACEMENT  
AT THE  
ETB BUILDING – TERRY CAMPUS  
DELAWARE TECHNICAL COMMUNITY COLLEGE  
100 CAMPUS DRIVE  
DOVER, DE 19904**

**BID FORM**

**For Bids Due:** January 11, 2018 at 2:00 pm

**To:** Ray Parsons  
Director of Administrative Services  
Delaware Technical Community College  
100 Campus Drive  
Dover, Delaware 19904

**Name of Bidder:** \_\_\_\_\_

**Delaware Business License No.:** \_\_\_\_\_ **Taxpayer ID No.:** \_\_\_\_\_  
**(A copy of Bidder's Delaware Business License must be attached to this form)**

**(Other License Nos.):** \_\_\_\_\_

**Phone No.:** (     ) \_\_\_\_\_ - \_\_\_\_\_ **Fax No.:** (     ) \_\_\_\_\_ - \_\_\_\_\_

The undersigned, representing that he has read and understood the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

\$ \_\_\_\_\_ (\$ \_\_\_\_\_ )

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**ROOF REPLACEMENT  
AT THE  
ETB BUILDING – TERRY CAMPUS  
DELAWARE TECHNICAL COMMUNITY COLLEGE  
100 CAMPUS DRIVE  
DOVER, DE 19904**

**BID FORM**

I/We acknowledge Addendums numbered \_\_\_\_\_ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for thirty (30) days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to achieve substantial completion of all the work within \_\_\_\_\_ calendar days of the Notice to Proceed.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By \_\_\_\_\_ Trading as \_\_\_\_\_  
(Individual's / General Partner's / Corporate Name)  
\_\_\_\_\_  
(State of Corporation)

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

Witness: \_\_\_\_\_ By: \_\_\_\_\_  
(SEAL) ( Authorized Signature )  
\_\_\_\_\_  
( Title )  
Date: \_\_\_\_\_

**ATTACHMENTS**

- Sub-Contractor List
- Non-Collusion Statement
- Affidavit(s) of Employee Drug Testing Program
- Bid Security
- (Others as Required by Project Manuals)

**ROOF REPLACEMENT  
AT THE  
ETB BUILDING – TERRY CAMPUS  
DELAWARE TECHNICAL COMMUNITY COLLEGE  
100 CAMPUS DRIVE  
DOVER, DE 19904**

**BID FORM**

**SUBCONTRACTOR LIST**

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.** This form must be filled out completely with no additions or deletions. **Note that all subcontractors listed below must have a signed Affidavit of Employee Drug Testing Program included with this bid.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City &amp; State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____

NOT FOR BIDDING PURPOSES



**ROOF REPLACEMENT  
AT THE  
ETB BUILDING – TERRY CAMPUS  
DELAWARE TECHNICAL COMMUNITY COLLEGE  
100 CAMPUS DRIVE  
DOVER, DE 19904**

**BID FORM**

**NON-COLLUSION STATEMENT**

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date (to the Office of Management and Budget, Division of Facilities Management).

All the terms and conditions of (Project or Contract Number) have been thoroughly examined and are understood.

**NAME OF BIDDER:** \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE (TYPED):** \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE (SIGNATURE):** \_\_\_\_\_

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

**ADDRESS OF BIDDER:** \_\_\_\_\_

**E-MAIL:** \_\_\_\_\_

**PHONE NUMBER:** \_\_\_\_\_

Sworn to and Subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 2017.

My Commission expires \_\_\_\_\_ NOTARY PUBLIC \_\_\_\_\_

**THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.**

**ROOF REPLACEMENT  
AT THE  
ETB BUILDING – TERRY CAMPUS  
DELAWARE TECHNICAL COMMUNITY COLLEGE  
100 CAMPUS DRIVE  
DOVER, DE 19904**

**AFFIDAVIT  
OF  
EMPLOYEE DRUG TESTING PROGRAM**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite that complies with this regulation:

**Contractor/Subcontractor Name:** \_\_\_\_\_

**Contractor/Subcontractor Address:** \_\_\_\_\_

**Authorized Representative (typed or printed):** \_\_\_\_\_

**Authorized Representative (signature):** \_\_\_\_\_

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

Sworn to and Subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 2017.

My Commission expires \_\_\_\_\_ NOTARY PUBLIC \_\_\_\_\_

NOT FOR BIDDING PURPOSES

**THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.**

STATE OF DELAWARE  
OFFICE OF MANAGEMENT AND BUDGET

**BID BOND**

KNOW ALL MEN BY THESE PRESENTS That: \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_ in the County of \_\_\_\_\_  
\_\_\_\_\_ and State of \_\_\_\_\_ as **Principal**, and \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_ in the County of \_\_\_\_\_  
and State of \_\_\_\_\_ as **Surety**, legally authorized to do business in the State of Delaware  
("State"), are held and firmly unto the State in the sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_), or \_\_\_\_\_ percent not to exceed \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)  
of amount of bid on Contract No. \_\_\_\_\_, to be paid to the State for the use and  
benefit of \_\_\_\_\_ (*insert State agency name*) for which payment  
well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and  
successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bonded **Principal**  
who has submitted to the \_\_\_\_\_ (*insert State agency name*) a  
certain proposal to enter into this contract for the furnishing of certain material and/or services within the  
**State**, shall be awarded this Contract, and if said **Principal** shall well and truly enter into and execute this  
Contract as may be required by the terms of this Contract and approved by the \_\_\_\_\_  
\_\_\_\_\_ (*insert State agency name*) this Contract to be entered into within twenty days after  
the date of official notice of the award thereof in accordance with the terms of said proposal, then this  
obligation shall be void or else to be and remain in full force and virtue.

Sealed with \_\_\_\_\_ seal and dated this \_\_\_\_\_ day of \_\_\_\_\_ in the year of our Lord two  
thousand and \_\_\_\_\_ (20\_\_\_\_).

SEALED, AND DELIVERED IN THE  
Presence of

\_\_\_\_\_  
Name of Bidder (Organization)

Corporate  
Seal

By:

\_\_\_\_\_  
Authorized Signature

Attest \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name of Surety

Witness: \_\_\_\_\_

By:

\_\_\_\_\_  
Title

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**SECTION 00 52 13**

**STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

The Standard Form of Agreement Between Owner and Contractor is as stated in the American Institute of Architects Document AIA A101 (2007 Edition) entitled Standard Form of Agreement Between Owner and Contractor and is part of this project manual as if herein written in full.

A draft copy of this document is included herein as follows.

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STATE OF DELAWARE

DIVISION OF FACILITIES MANAGEMENT

**SUPPLEMENT TO AGREEMENT BETWEEN OWNER AND CONTRACTOR A101-2007**

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2007. Where a portion of the Standard Form of Agreement is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement shall remain in effect.

**ARTICLE 5: PAYMENTS**

5.1 PROGRESS PAYMENTS

5.1.3 Delete paragraph 5.1.3 in its entirety and replace with the following:

"Provided that a valid Application for Payment is received by the Architect that meets all requirements of the Contract, payment shall be made by the Owner not later than 30 days after the Owner receives the valid Application for Payment."

**ARTICLE 6: DISPUTE RESOLUTION**

6.2 BINDING DISPUTE RESOLUTION

Check Other – and add the following sentence:

"Any remedies available in law or in equity."

**ARTICLE 8: MISCELLANEOUS PROVISIONS**

8.2 Insert the following:

"Payments are due 30 days after receipt of a valid Application for Payment. After that 30 day period interest may be charged at the rate of 1% per month not to exceed 12% per annum."

8.5 Delete paragraph 8.5 in its entirety and replace with the following:

"The Contractor's representative shall not be changed without ten days written notice to the Owner."

END OF SECTION

NOT FOR BIDDING PURPOSES

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Amendment to Contract for Construction  
Between  
Delaware Technical and Community College  
And

---

The parties hereby agree and reaffirm that the AIA Document A101 - 2007 "Standard Form of Agreement between Owner and Contractor" between Delaware Technical and Community College ("Owner") and \_\_\_\_\_, a \_\_\_\_\_ corporation ("Contractor"), dated \_\_\_\_\_, 201\_, shall govern this transaction as supplemented and amended herein ("Contract Documents"). At times Owner and Contractor shall be collectively referred to the "Parties".

The parties expressly agree to enter into this amendment ("Amendment") which shall govern in the event of a conflict between the terms of the Contract Documents or any document referenced or incorporated therein, and that any contrary provision of any such document shall be superseded hereby. The parties agree to this Amendment as follows:

1. Contractor represents and warrants that it has not employed or retained any company or person, other than a bona fide employee working primarily for the firm offering professional services, to solicit or secure this agreement, and that he has not been paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working primarily for the firm offering professional services, any fee, commission, percentage, gift, or any other consideration, contingent upon or resulting from the award or making of this agreement;
2. All provisions of the Bid Package and Project manual are incorporated herein by reference as though fully set forth. In the event of a conflict between any provision of the Bid Package or Project Manual and the bid or proposal submitted by Contractor, the Bid Package and Project Manual shall control.
3. §3.3 is amended to require substantial completion of all construction not later than \_\_\_\_\_ days from the commencement of construction. Time is of the essence.
4. In the event the attached contract or aggregate of contracts is in excess of \$500,000 for new construction (including painting and decorating) or \$45,000 for alteration, repair, renovation, rehabilitation, demolition or reconstruction (including painting and decorating of buildings or works) and requires or involves the employment of mechanics and/or laborers, then the minimum wages to be paid to the various classes of laborers and mechanics shall be based upon greater of the Davis-Bacon Wage Rates (if the project is federally funded) or the wages that will be determined by the Delaware Department of Labor, Division of Industrial Affairs, to be prevailing in the county in which the work is to be performed.

5. Contractor shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than the prevailing wages, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics, and shall provide sworn payroll information, as required by the Department of Labor, on a weekly basis.
6. All changes to the scope of construction shall be authorized in writing by Owner in advance. Owner shall not be liable for payment of any change order that has not received prior written authorization. The cost of any change order shall be set forth therein. If no such provision is set forth in the change order, then the cost to the Owner shall be the Contractor's costs for wages, labor costs other than wages, wages taxes, materiel, equipment rentals, insurance and subcontracts attributable to the additional activity plus a reasonable sum for overhead and profit not to exceed 5%;
7. Preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State. Contractor shall pay a penalty to the Secretary of Finance equal to the amount of compensation paid to any person in violation of this section;
8. Contractor shall not substitute another subcontractor for any subcontractor whose name was set forth in the statement which accompanied the bid without the written consent of Owner. Contractor shall pay a penalty equal to 150% of the amount of the proposal or subcontract submitted by the subcontractor identified in the accompanying statement for violating this paragraph.
9. Payments are due 30 days after receipt of a valid Application for Payment. Payments due and unpaid after 30 days shall bear simple interest at the rate of 1 percent per month not greater than 12% annual percentage rate;
10. Final payment shall not be due until all non-conforming work has been corrected and all other provisions of the agreement have been met, including, but not limited to, all reporting requirements. Furthermore, a written release of mechanics' liens signed by all persons who would otherwise be entitled to avail themselves of the provisions of Chapter 21 of Title 25 of the Delaware Code, containing a notarized, verified certification signed by the Contractor that all of the persons signing the release constitute all of the persons who have furnished materials and performed labor in and for the construction, erection, building, improvement, alteration and repair to the date of the release and who would be entitled otherwise to file mechanics' liens claims shall be provided simultaneously with the receipt of final payment;
11. Owner may terminate this agreement or suspend work hereunder for any reason authorized by applicable Delaware law;

12. §6.2 is hereby deleted. The parties reserve all remedies available at law or equity for any dispute not resolved in accordance with §6.1;
13. § 10 is hereby deleted. Simultaneous with the execution of this contract, Contractor shall also execute a good and sufficient bond for the benefit of Owner, with corporate surety authorized to do business in this State, in a sum equal to 100% of the contract price and the bond form used shall be the standard form issued by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the proposal and plans and specifications thereof, at the time and in the manner prescribed by the contract and the plans and specifications, including the payment in full to every firm furnishing material or performing labor in the performance of the contract, of all sums of money due it for such labor or material. The bond shall also contain the Contractor's guarantee to indemnify and save harmless the Owner from all costs, damages and expenses growing out of or by reason of Contractor's failure to comply and perform the work and complete the contract in accordance with its terms. No firm or surety, in any action brought under 29 Del C §6962, or any successor law, or on the bond required by such statute, shall assert as a defense to such action the claim that the bond given contained a limitation or restriction not provided for by Chapter 69, Title 29 of the Delaware Code, the provisions of which are incorporated herein by reference as though fully set forth;
14. Owner shall have the right to terminate the contract upon receipt of notice from Contractor's surety that bond claims have been made or are anticipated to be made against Contractor on this or any other project of Contractor. If Owner elects to terminate the contract pursuant to this paragraph, it shall be deemed a termination for cause.
15. Owner may, when it considers that its interests so require, cause judgment to be confessed upon the bond. All sums received through confession of judgment shall be paid for the credit of the Owner to the Secretary of Finance;
16. Owner or any of its duly authorized representatives shall have access to any documents, books, papers, and records of Contractor (which are directly pertinent to a specific grant program) for the purpose of making an audit, examination, excerpts, and transcriptions. Contractor shall maintain all required records for at least three years after Owner makes final payment and all pending matters are closed;
17. Contractor shall submit a report to Owner not less frequently than monthly covering the general progress of the job and describing any problems or factors contributing to delay;
18. During the performance of this contract, the contractor agrees as follows:

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation gender identity, pregnancy, or national origin. The contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race,

creed, color, sex, sexual orientation, gender identity, pregnancy, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.

The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, sexual orientation, or national origin.

19. The parties agree that this Agreement shall be governed by and construed pursuant to the laws of The State of Delaware, and that the Delaware courts shall have sole and exclusive jurisdiction of any dispute arising under this agreement. Furthermore, CONTRACTOR hereby agrees to accept service of process in any civil action arising out of this Agreement as set forth in Title 10, Chapter 31 of the Delaware Code, including but not limited to, by any form of certified mail addressed to CONTRACTOR.

IN WITNESS WHEREOF, the parties, through their acknowledged and duly authorized agents set forth below, have set their hands and seal on this indenture on this \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_\_\_\_.

Delaware Technical and Community College

\_\_\_\_\_(Seal)

Dr. Mark T. Brainerd, President

(Contractor)

\_\_\_\_\_(Seal)

By \_\_\_\_\_

STATE OF DELAWARE  
OFFICE OF MANAGEMENT AND BUDGET

**PERFORMANCE BOND**

Bond Number: \_\_\_\_\_

KNOW ALL PERSONS BY THESE PRESENTS, that we, \_\_\_\_\_ as principal (“**Principal**”), and \_\_\_\_\_, a \_\_\_\_\_ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the \_\_\_\_\_ (“**Owner**”) (*insert State agency name*), in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally for and in the whole, firmly by these presents.

Sealed with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. \_\_\_\_\_ dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the “**Contract**”), which Contract is incorporated herein by reference, shall well and truly provide and furnish all materials, appliances and tools and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as defined in the Contract) or any changes or modifications thereto made as therein provided, shall make good and reimburse **Owner** sufficient funds to pay the costs of completing the Contract that **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

**Surety**, for value received, hereby stipulates and agrees, if requested to do so by **Owner**, to fully perform and complete the work to be performed under the Contract pursuant to the terms, conditions and covenants thereof, if for any cause **Principal** fails or neglects to so fully perform and complete such work.

**Surety**, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other

transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

**Surety** hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seal, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

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

Witness or Attest: Address: \_\_\_\_\_

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

(Corporate Seal)

By: \_\_\_\_\_ (SEAL)  
Name:  
Title:

SURETY

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

Witness or Attest: Address: \_\_\_\_\_

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

(Corporate Seal)

By: \_\_\_\_\_ (SEAL)  
Name:  
Title:

NOT FOR BIDDING PURPOSES

STATE OF DELAWARE  
OFFICE OF MANAGEMENT AND BUDGET

**PAYMENT BOND**

Bond Number: \_\_\_\_\_

KNOW ALL PERSONS BY THESE PRESENTS, that we, \_\_\_\_\_, as principal (“**Principal**”), and \_\_\_\_\_, a \_\_\_\_\_ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the \_\_\_\_\_ (“**Owner**”) (*insert State agency name*), in the amount of \_\_\_\_\_ (\$\_\_\_\_\_), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole firmly by these presents.

Sealed with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. \_\_\_\_\_ dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the “**Contract**”), which Contract is incorporated herein by reference, shall well and truly pay all and every person furnishing materials or performing labor or service in and about the performance of the work under the Contract, all and every sums of money due him, her, them or any of them, for all such materials, labor and service for which **Principal** is liable, shall make good and reimburse **Owner** sufficient funds to pay such costs in the completion of the Contract as **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

**Surety**, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

**Surety** hereby stipulates and agrees that no modifications, omission or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

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

Witness or Attest: Address: \_\_\_\_\_

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

(Corporate Seal)

By: \_\_\_\_\_ (SEAL)

Name:  
Title:

SURETY

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

Witness or Attest: Address: \_\_\_\_\_

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

(Corporate Seal)

By: \_\_\_\_\_ (SEAL)

Name:  
Title:

NOT FOR BIDDING PURPOSES



SECTION 00 62 76  
CHANGE ORDER AIA G701-2001

AIA Document G701™CMa–1992 is for implementing changes in the work agreed to by the owner, contractor, construction manager adviser, and architect. Execution of a completed AIA Document G701™–2001 indicates agreement upon all the terms of the change, including any changes in the Contract Sum (or Guaranteed Maximum Price) and Contract Time. It provides space for the signatures of the owner, contractor, construction manager adviser, and architect, and for a complete description of the change. The major difference between AIA Documents G701CMa–1992 and G701–2001 is that the signature of the construction manager adviser, along with those of the owner, architect and contractor, is required to validate the change order.

A draft copy of this document is included herein as follows

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**SECTION 00 62 76**  
**APPLICATION AND CERTIFICATE FOR PAYMENT AIA G702-1992**

The Application and Certificate for Payment is as stated in the American Institute of Architects Document AIA G702 (1992 Edition) entitled Application and Certificate for Payment and is part of this project manual as if herein written in full.

A draft copy of this document is included herein as follows

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SECTION 00 62 76

APPLICATION FOR PAYMENT CONTINUATION SHEET AIA G703 -1992

AIA Document G702, Application and Certificate for Payment, is to be used in conjunction with AIA Document G703, Continuation Sheet. These documents are designed for use on Projects where the Contractor has a direct Agreement with the Owner. Procedures for their use are covered in AIA Document A201, General Conditions of the Contract for Construction.

A draft copy of this document is included herein as follows.

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SECTION 00 62 76

CERTIFICATE OF SUBSTANTIAL COMPLETION AIA G704 - 2000

AIA Document G704™-2000 is a standard form for recording the date of substantial completion of the work or a designated portion thereof. The contractor prepares a list of items to be completed or corrected, and the architect verifies and amends this list. If the architect finds that the work is substantially complete, the form is prepared for acceptance by the contractor and the owner, and the list of items to be completed or corrected is attached. In AIA Document G704-2000 the parties agree on the time allowed for completion or correction of the items, the date when the owner will occupy the work or designated portion thereof, and a description of responsibilities for maintenance, heat, utilities and insurance.

A draft copy of this document is included herein as follows.

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SECTION 00 62 76

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS AIA G706 - 1994

The contractor submits this affidavit with the final request for payment, stating that all payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the owner might be responsible has been paid or otherwise satisfied. AIA Document G706™-1994 requires the contractor to list any indebtedness or known claims in connection with the construction contract that have not been paid or otherwise satisfied. The contractor may also be required to furnish a lien bond or indemnity bond to protect the owner with respect to each exception.

A draft copy of this document is included herein as follows.

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SECTION 00 62 76

CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS AIA G706A - 1994

AIA Document G706A™-1994 supports AIA Document G706™-1994 in the event that the owner requires a sworn statement of the contractor stating that all releases or waivers of liens have been received. In such event, it is normal for the contractor to submit AIA Documents G706-1994 and G706A-1994 along with attached releases or waivers of liens for the contractor, all subcontractors, and others who may have lien rights against the owner's property. The contractor is required to list any exceptions to the sworn statement provided in G706A-1994, and may be required to furnish to the owner a lien bond or indemnity bond to protect the owner with respect to such exceptions.

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SECTION 00 62 76

CONSENT OF SURETY TO FINAL PAYMENT AIA G707 - 1994

AIA Document G707™-1994 is intended for use as a companion to AIA Document G706™-1994, Contractor's Affidavit of Payment of Debts and Claims, on construction projects where the contractor is required to furnish a bond. By obtaining the surety's approval of final payment to the contractor and its agreement that final payment will not relieve the surety of any of its obligations, the owner may preserve its rights under the bond.

A draft copy of this document is included herein as follows.

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SECTION 00 62 76

ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS AIA G710 -1992

AIA Document G710™-1992 is used by the architect to issue additional instructions or interpretations or to order minor changes in the work. It is intended to assist the architect in performing its obligations as interpreter of the contract documents in accordance with the owner/architect agreement and the general conditions of the contract for construction. AIA Document G710-1992 should not be used to change the contract sum or contract time. It is intended to help the architect perform its services with respect to minor changes not involving adjustment in the contract sum or contract time. Such minor changes are authorized under Section 7.4 of AIA Document A201™-2007.

A draft copy of this document is included herein as follows

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SECTION 00 62 76  
CONSTRUCTION CHANGE DIRECTIVE AIA G714 - 2007

AIA Document G714™-2007 is a directive for changes in the Work for use where the owner and contractor have not reached an agreement on proposed changes in the contract sum or contract time. AIA Document G714-2007 was developed as a directive for changes in the work which, if not expeditiously implemented, might delay the project. Upon receipt of a completed G714-2007, the contractor must promptly proceed with the change in the work described therein. NOTE: G714-2001 expired in 2009.

A draft copy of this document is included herein as follows.

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SECTION 00 62 76  
ACORD CERTIFICATE OF INSURANCE AIA G715-1991

AIA Document G715™-1991 is intended for use in adopting ACORD Form 25-S to certify the coverage required of contractors under AIA Document A201™-2007, General Conditions of the Contract for Construction. Since the ACORD certificate does not have space to show all the coverages required in AIA Document A201-2007, the Supplemental Attachment form should be completed, signed by the contractor's insurance representative, and attached to the ACORD certificate.

A draft copy of this document is included herein as follows.

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SECTION 00 72 13

GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

The General Conditions of this Contract are as stated in the American Institute of Architects Document AIA A201 (2007 Edition) entitled General Conditions of the Contract for Construction and is part of this project manual as if herein written in full.

A draft copy of this document is included herein as follows.

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**SECTION 00 73 13**

**SUPPLEMENTARY GENERAL CONDITIONS A201-2007**

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201-2007. Where a portion of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7. CHANGES IN THE WORK
8. TIME
9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

## ARTICLE 1: GENERAL PROVISIONS

## 1.1 BASIC DEFINITIONS

## 1.1.1 THE CONTRACT DOCUMENTS

Delete the last sentence in its entirety and replace with the following:

“The Contract Documents also include Advertisement for Bid, Instructions to Bidder, sample forms, the Bid Form, the Contractor’s completed Bid and the Award Letter.”

Add the following Paragraph:

1.1.2 In the event of conflict or discrepancies among the Contract Documents, the Documents prepared by the State of Delaware, Division of Facilities Management shall take precedence over all other documents.

## 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Paragraphs:

1.2.4 In the case of an inconsistency between the Drawings and the Specifications, or within either document not clarified by addendum, the better quality or greater quantity of work shall be provided in accordance with the Architect’s interpretation.

1.2.5 The word “PROVIDE” as used in the Contract Documents shall mean “FURNISH AND INSTALL” and shall include, without limitation, all labor, materials, equipment, transportation, services and other items required to complete the Work.

1.2.6 The word “PRODUCT” as used in the Contract Documents means all materials, systems and equipment.

## 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

Delete Paragraph 1.5.1 in its entirety and replace with the following:

“All pre-design studies, drawings, specifications and other documents, including those in electronic form, prepared by the Architect under this Agreement are, and shall remain, the property of the Owner whether the Project for which they are made is executed or not. Such documents may be used by the Owner to construct one or more like Projects without the approval of, or additional compensation to, the Architect. The Contractor, Subcontractors, Sub-subcontractors and Material or Equipment Suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect’s consultants appropriate to and for use in the execution of their Work under the Contract Documents. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or Material and Equipment Supplier on other Projects or for



additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and Architect's consultants.

The Architect shall not be liable for injury or damage resulting from the re-use of drawings and specifications if the Architect is not involved in the re-use Project. Prior to re-use of construction documents for a Project in which the Architect is not also involved, the Owner will remove from such documents all identification of the original Architect, including name, address and professional seal or stamp."

Delete Paragraph 1.5.2 in its entirety.

## ARTICLE 2: OWNER

### 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

To Subparagraph 2.2.3 – Add the following sentence:

"The Contractor, at their expense shall bear the costs to accurately identify the location of all underground utilities in the area of their excavation and shall bear all cost for any repairs required, out of failure to accurately identify said utilities."

Delete Subparagraph 2.2.5 in its entirety and substitute the following:

2.2.5 The Contractor shall be furnished free of charge up to three (3) sets of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

## ARTICLE 3: CONTRACTOR

### 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Amend Paragraph 3.2.2 to state that any errors, inconsistencies or omissions discovered shall be reported to the Architect and Owner immediately.

Delete the third sentence in Paragraph 3.2.3.

### 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Paragraphs:

3.3.2.1 The Contractor shall immediately remove from the Work, whenever requested to do so by the Owner, any person who is considered by the Owner or Architect to be incompetent or disposed to be so disorderly, or who for any reason is not satisfactory to the Owner, and that person shall not again be employed on the Work without the consent of the Owner or the Architect.

3.3.4 The Contractor must provide suitable storage facilities at the Site for the proper protection and safe storage of their materials. Consult the Owner and the Architect before storing any materials.

- 3.3.5 When any room is used as a shop, storeroom, office, etc., by the Contractor or Subcontractor(s) during the construction of the Work, the Contractor making use of these areas will be held responsible for any repairs, patching or cleaning arising from such use.

### 3.4 LABOR AND MATERIALS

Add the Following Paragraphs:

- 3.4.4 Before starting the Work, each Contractor shall carefully examine all preparatory Work that has been executed to receive their Work. Check carefully, by whatever means are required, to insure that its Work and adjacent, related Work, will finish to proper contours, planes and levels. Promptly notify the General Contractor/Construction Manager of any defects or imperfections in preparatory Work which will in any way affect satisfactory completion of its Work. Absence of such notification will be construed as an acceptance of preparatory Work and later claims of defects will not be recognized.

- 3.4.5 Under no circumstances shall the Contractor's Work proceed prior to preparatory Work having been completely cured, dried and/or otherwise made satisfactory to receive this Work. Responsibility for timely installation of all materials rests solely with the Contractor responsible for that Work, who shall maintain coordination at all times.

### 3.5 WARRANTY

Add the following Paragraphs:

- 3.5.1 The Contractor will guarantee all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for two (2) years after Acceptance by the Owner, and will maintain all items in perfect condition during the period of guarantee.

- 3.5.2 Defects appearing during the period of guarantee will be made good by the Contractor at his expense upon demand of the Owner, it being required that all work will be in perfect condition when the period of guarantee will have elapsed.

- 3.5.3 In addition to the General Guarantee there are other guarantees required for certain items for different periods of time than the two (2) years as above, and are particularly so stated in that part of the specifications referring to same. The said guarantees will commence at the same time as the General Guarantee.

- 3.5.4 If the Contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the Owner will have the right to replace, repair, or otherwise remedy the failure, defect or damage at the Contractor's expense.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Paragraphs:

- 3.11.1 During the course of the Work, the Contractor shall maintain a record set of drawings on which the Contractor shall mark the actual physical location of all piping, valves, equipment, conduit, outlets, access panels, controls, actuators, including all appurtenances that will be concealed once construction is complete, etc., including all invert elevations.
- 3.11.2 At the completion of the project, the Contractor shall obtain a set of reproducible drawings from the Architect, and neatly transfer all information outlined in 3.11.1 to provide a complete record of the as-built conditions.
- 3.11.3 The Contractor shall provide two (2) prints of the as-built conditions, along with the reproducible drawings themselves, to the Owner and one (1) set to the Architect. In addition, attach one (1) complete set to each of the Operating and Maintenance Instructions/Manuals.

3.17 In the first sentence of the paragraph, insert “indemnify” between “shall” and “hold”.

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.2 ADMINISTRATION OF THE CONTRACT

Delete the first sentence of Paragraph 4.2.7 and replace with the following:

The Architect will review and approve or take other appropriate action upon the Contractor’s submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.

Delete the second sentence of Paragraph 4.2.7 and replace with the following:

The Architect’s action will be taken with such reasonable promptness as to cause no delay in the Work in the activities of the Owner, Contractor or separate Contractors, while allowing sufficient time in the Owner’s professional judgment to permit adequate review.

Add the following Paragraph:

- 4.2.10.1 There will be no full-time project representative provided by the Owner or Architect on this project.

Add to Paragraph 4.2.13 “and in compliance with all local requirements.” to the end of the sentence

ARTICLE 5: SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Paragraph 5.2.3 in its entirety and replace with the following:

- 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection, subject to the statutory requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4.

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER’S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

Delete Paragraph 6.1.4 in its entirety.

6.2 MUTUAL RESPONSIBILITY

- 6.2.3 In the second sentence, strike the word “shall” and insert the word “may”.

ARTICLE 7: CHANGES IN THE WORK

(SEE ARTICLE 7: CHANGES IN WORK IN THE GENERAL REQUIREMENTS)

ARTICLE 8: TIME

8.2 PROGRESS AND COMPLETION

Add the following Paragraphs:

- 8.2.1.1 Refer to Specification Section SUMMARY OF WORK for Contract time requirements

- 8.2.4 If the Work falls behind the Progress Schedule as submitted by the Contractor, the Contractor shall employ additional labor and/or equipment necessary to bring the Work into compliance with the Progress Schedule at no additional cost to the Owner.

8.3 DELAYS AND EXTENSION OF TIME

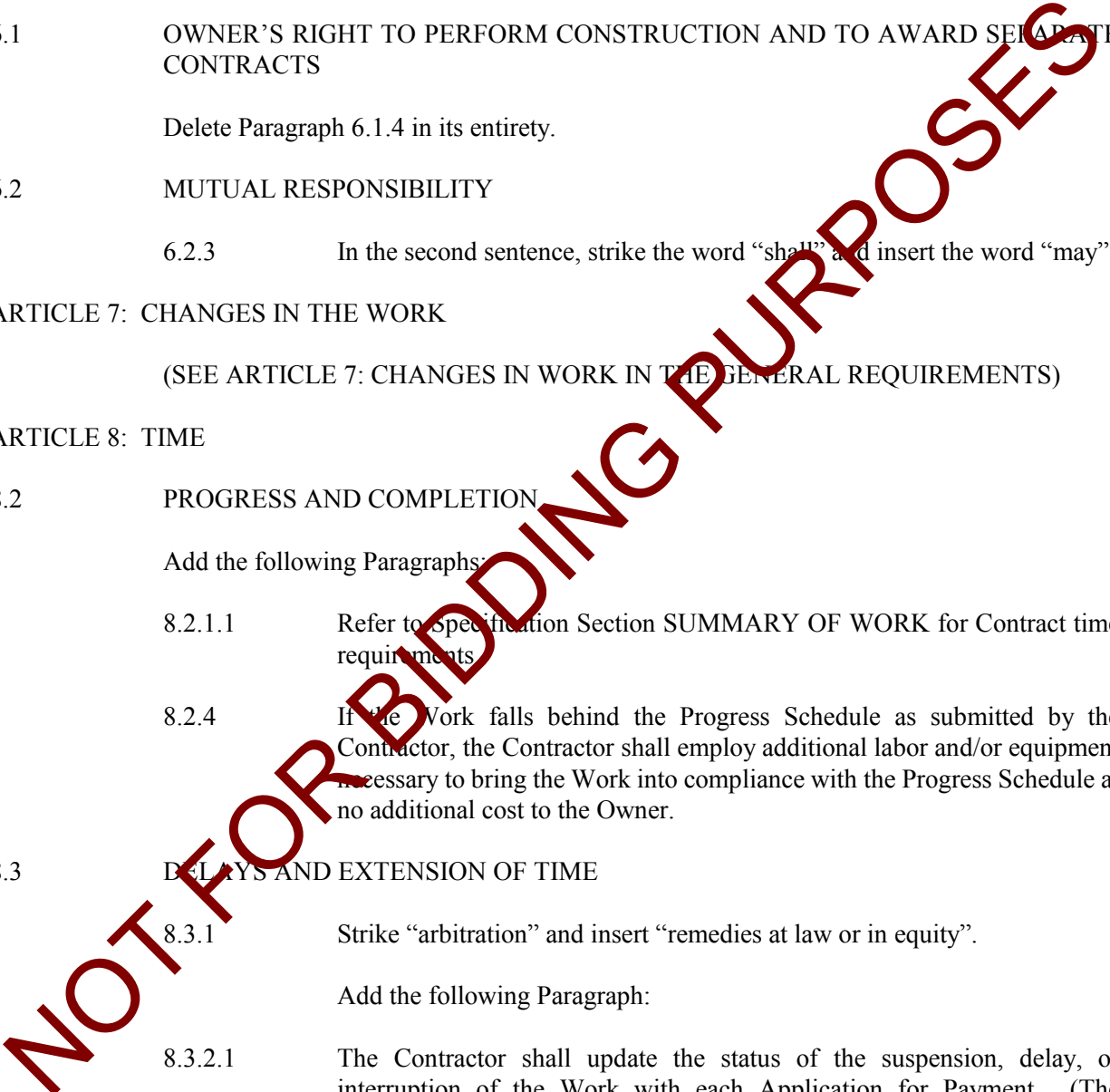
- 8.3.1 Strike “arbitration” and insert “remedies at law or in equity”.

Add the following Paragraph:

- 8.3.2.1 The Contractor shall update the status of the suspension, delay, or interruption of the Work with each Application for Payment. (The Contractor shall report the termination of such cause immediately upon the termination thereof.) Failure to comply with this procedure shall constitute a waiver for any claim for adjustment of time or price based upon said cause.

Delete Paragraph 8.3.3 in its entirety and replace with the following:

- 8.3.3 Except in the case of a suspension of the Work directed by the Owner, an extension of time under the provisions of Paragraph 8.3.1 shall be the



Contractor's sole remedy in the progress of the Work and there shall be no payment or compensation to the Contractor for any expense or damage resulting from the delay.

Add the following Paragraph:

8.3.4 By permitting the Contractor to work after the expired time for completion of the project, the Owner does not waive their rights under the Contract.

## ARTICLE 9: PAYMENTS AND COMPLETION

### 9.2 SCHEDULE OF VALUES

Add the following Paragraphs:

9.2.1 The Schedule of Values shall be submitted using AIA Document G702 and Continuation Sheet to G703.

9.2.2 The Schedule of Values is to include a line item for Project Closeout Document Submittal. The value of this item is to be no less than 1% of the initial contract amount.

### 9.3 APPLICATIONS FOR PAYMENT

Add the following Paragraph:

9.3.1.3 Application for Payment shall be submitted on AIA Document G702 "Application and Certificate for Payment", supported by AIA Document G703 "Continuation Sheet". Said Applications shall be fully executed and notarized.

Add the following Paragraphs:

9.3.4 Until Closeout Documents have been received and outstanding items completed the Owner will pay 95% (ninety-five percent) of the amount due the Contractor on account of progress payments.

9.3.5 The Contractor shall provide a current and updated Progress Schedule to the Architect with each Application for Payment. Failure to provide Schedule will be just cause for rejection of Application for Payment.

### 9.5 DECISIONS TO WITHHOLD CERTIFICATION

Add the following to 9.5.1:

- .8 failure to provide a current Progress Schedule;
- .9 a lien or attachment is filed;
- .10 failure to comply with mandatory requirements for maintaining Record Documents.

### 9.6 PROGRESS PAYMENTS

Delete Paragraph 9.6.1 in its entirety and replace with the following:

9.6.1 After the Architect has approved and issued a Certificate for Payment, payment shall be made by the Owner within 30 days after Owner’s receipt of the Certificate for Payment.

9.7 FAILURE OF PAYMENT

In first sentence, strike “seven” and insert “thirty (30)”. Also strike “binding dispute resolution” and insert “remedies at law or in equity”.

9.8 SUBSTANTIAL COMPLETION

To Subparagraph 9.8.3- Add the following sentence:

“If the Architect is required to make more than 2 inspections of the same portion of work, the Contractor shall be responsible for all costs associated with subsequent inspections including but not limited to any Architect’s fees.”

9.8.5 In the second sentence, strike “shall” and insert “may”.

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

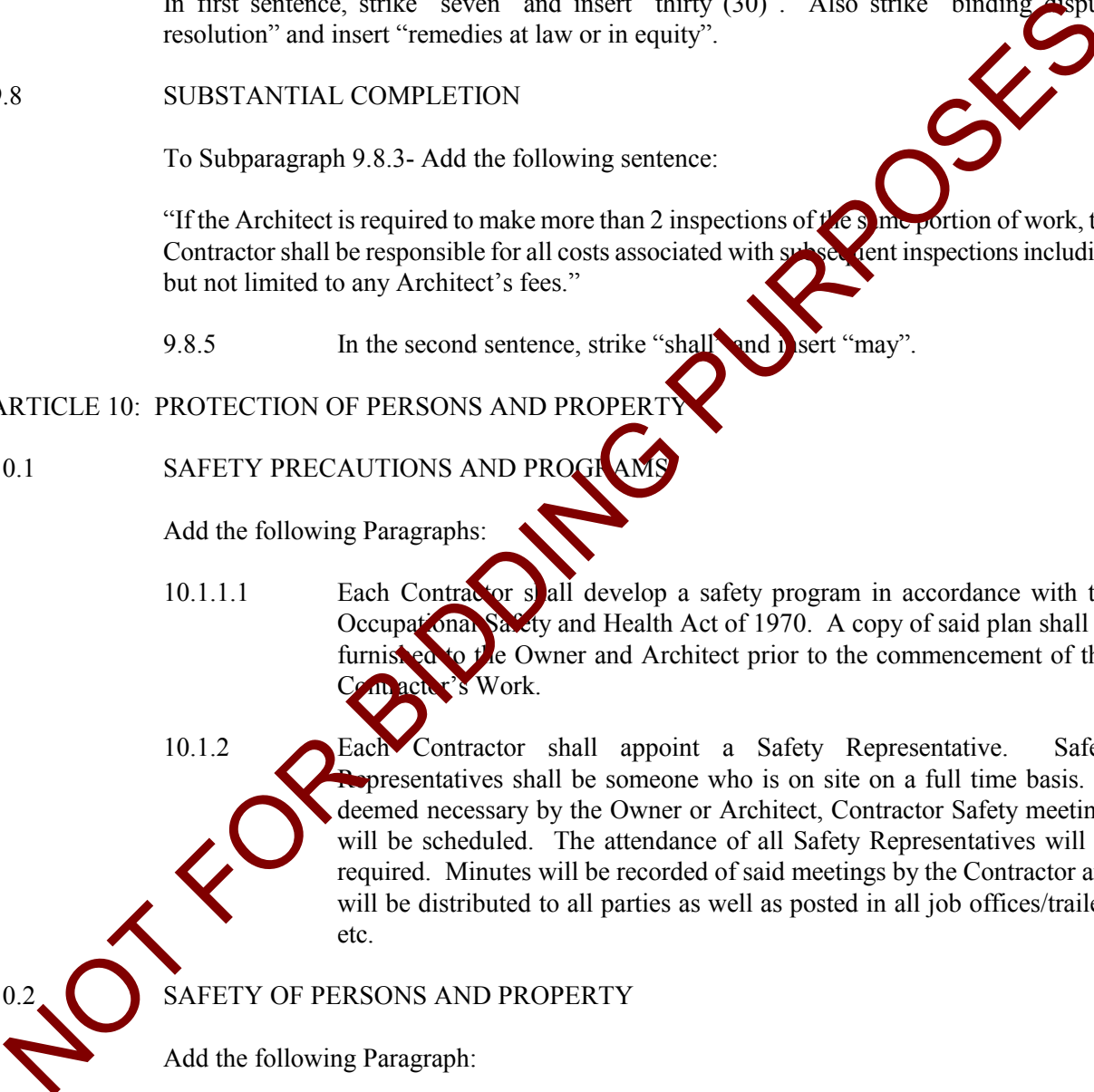
Add the following Paragraphs:

10.1.1.1 Each Contractor shall develop a safety program in accordance with the Occupational Safety and Health Act of 1970. A copy of said plan shall be furnished to the Owner and Architect prior to the commencement of that Contractor’s Work.

10.1.2 Each Contractor shall appoint a Safety Representative. Safety Representatives shall be someone who is on site on a full time basis. If deemed necessary by the Owner or Architect, Contractor Safety meetings will be scheduled. The attendance of all Safety Representatives will be required. Minutes will be recorded of said meetings by the Contractor and will be distributed to all parties as well as posted in all job offices/trailers etc.

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Paragraph:



10.2.4.1 As required in the Hazardous Chemical Act of June 1984, all vendors supplying any material that may be defined as hazardous must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a caution warning on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in foreseeable emergency situations. Material Safety Data Sheets shall be provided directly to the Owner, along with the shipping slips that include those products.

10.3 HAZARDOUS MATERIALS

Delete Paragraph 10.3.3 in its entirety.

10.5 Delete Paragraphs 10.3.6 in its entirety.

ARTICLE 11: INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.4 Strike "the Owner" immediately following "(1)" and strike "and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations."

11.2 OWNER'S LIABILITY INSURANCE

Delete Paragraph 11.2 in its entirety.

11.3 PROPERTY INSURANCE

Delete Paragraph 11.3 in its entirety and replace with the following:

11.3 The State will not provide Builder's All Risk Insurance for the Project. The Contractor and all Subcontractors shall provide property coverage for their tools and equipment, as necessary. Any mandatory deductible required by the Contractor's Insurance shall be the responsibility of the Contractor.

11.4 PERFORMANCE BOND AND PAYMENT BOND

Add the following sentence: "The bonds will conform to those forms approved by the Office of Management and Budget."

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.2.2 AFTER SUBSTANTIAL COMPLETION

Add the following Paragraph:

12.2.2.1.1 At any time during the progress of the Work, or in any case where the nature of the defects will be such that it is not expedient to have corrected, the

Owner, at its option, will have the right to deduct such sum, or sums, of money from the amount of the Contract as it considers justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

- 12.2.2.1 Strike “one” and insert “two”.
- 12.2.2.2 Strike “one” and insert “two”.
- 12.2.2.3 Strike “one” and insert “two”.
- 12.2.5 In second sentence, strike “one” and insert “two”.

#### ARTICLE 13: MISCELLANEOUS PROVISIONS

##### 13.1 GOVERNING LAW

Strike “except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.”

##### 13.6 INTEREST

Strike “the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.” Insert “30 days of presentment of the authorized Certificate of Payment at the annual rate of 12% or 1% per month.”

##### 13.7 TIME LIMITS ON CLAIMS

Strike the last sentence.

Add the following Paragraph:

##### 13.8 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS

- 13.8.1 If any provision, specifications or requirement of the Contract Documents conflict or is inconsistent with any statute, law or regulation of the government of the United States of America, the Contractor shall notify the Architect and Owner immediately upon discovery.

#### ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

##### 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

Delete Paragraph 14.4.3 in its entirety and replace with the following:

- 14.4.3 In case of such termination for the Owner’s convenience, the Contractor shall be entitled to receive payment for Work executed, and cost incurred by reason of such termination along with reasonable overhead.

#### ARTICLE 15: CLAIMS AND DISPUTES



15.1.2 Throughout the Paragraph strike “21” and insert “45”.

15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

Delete Paragraph 15.1.6 in its entirety.

15.2 INITIAL DECISION

Delete Paragraph 15.2.5 in its entirety and replace with the following:

15.2.5 The Architect will approve or reject Claims by written decision which shall state the reasons therefore and shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be subject to mediation and other remedies at law or in equity.

Delete Paragraph 15.2.6 and its subparagraphs in their entirety.

15.3 MEDIATION

15.3.1 Strike “binding dispute resolution” and insert “any or all remedies at law or in equity”.

15.3.2 In the first sentence, delete “administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement,” Strike “binding dispute resolution” and insert “remedies at law and in equity”.

15.4 ARBITRATION

Delete Paragraph 15.4 and its sub-sections in its entirety.

END OF SECTION

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**SECTION 00 73-14**

**ADDITIONAL SUPPLEMENTAL GENERAL CONDITIONS**

PART 1 GENERAL

1.01 GENERAL CONDITIONS

- A. The General Conditions of the Contract for Construction, AIA Document A201, 1997 edition, Articles 1 through 14 inclusive, is part of this contract and is bound here with.
- B. Reference to Articles herein are to AIA Document A201.

1.02 SUPPLEMENTARY CONDITIONS

- A. The following provisions modify, change, delete from or add to AIA Document A201. Where any article of the General Conditions is modified or any paragraph, subparagraph or clause thereof is modified or deleted by these provisions, the unaltered provisions of that article, paragraph, sub-paragraph or clause shall remain in effect.

1.03 REFERENCE TO DIVISION 1 - GENERAL REQUIREMENTS

- A. Certain provisions of Division 1, GENERAL REQUIREMENTS supplement the administrative and work-related provisions of the GENERAL CONDITIONS.
- B. Articles affected are cross referenced in the various sections of Division 1.
- C. Throughout the entire document, wherever "Architect" is stated, read "Engineer".

1.04 ARTICLE 1 - CONTRACT DOCUMENTS

- A. Paragraph 1.1 Basic Definitions

Add the following subparagraph:

1.1.8 Terms and Definitions

The following definitions apply to the terms listed below as used on the Drawings and in the Project Manual.

Approved: Accepted by the Engineer or authority enforcing standards.

Described: Refer to Project Manual.

Specified: Refer to Project Manual.

Shown: Refer to Drawings.

1.05 ARTICLE 3 - CONTRACTOR

A. Paragraph 3.4 - Labor and Materials

Subparagraph 3.4.1 - Add the following sentence:

Refer to Division 1 for detailed requirements concerning Temporary Facilities and Equipment.

Subparagraph 3.4.2 - Add the following sentence:

Refer specifically to Division 1 for detailed procedures regarding substitutions of material and/or equipment.

B. Paragraph 3.7 - Permits, Fees and Notices

Add the following:

3.7.5 Where local law at the site of the building requires a Certificate of Occupancy, the Contractor shall obtain and pay for this certificate and deliver it to the Owner.

1.06 ARTICLE 5 - SUBCONTRACTORS

A. Paragraph 5.2 - Award of Subcontracts and Other Contracts for Portions of the Work.

Add the following subparagraphs.

5.2.6 For Public Works Contracts, the Contractor shall not subcontract, sublet, sell, or transfer work or materials to an organization other than their own without written permission from the State. In case such permission is given, the Contractor will be permitted to subcontract or sublet a portion thereof but shall perform with their own organization, work amounting to not less than ten percent (10%) of the total contract bid price, exclusive of General Condition Items, Overhead, and Profit.

1.07 ARTICLE 8 - TIME

A. Paragraph 8.1.2

Add the following:

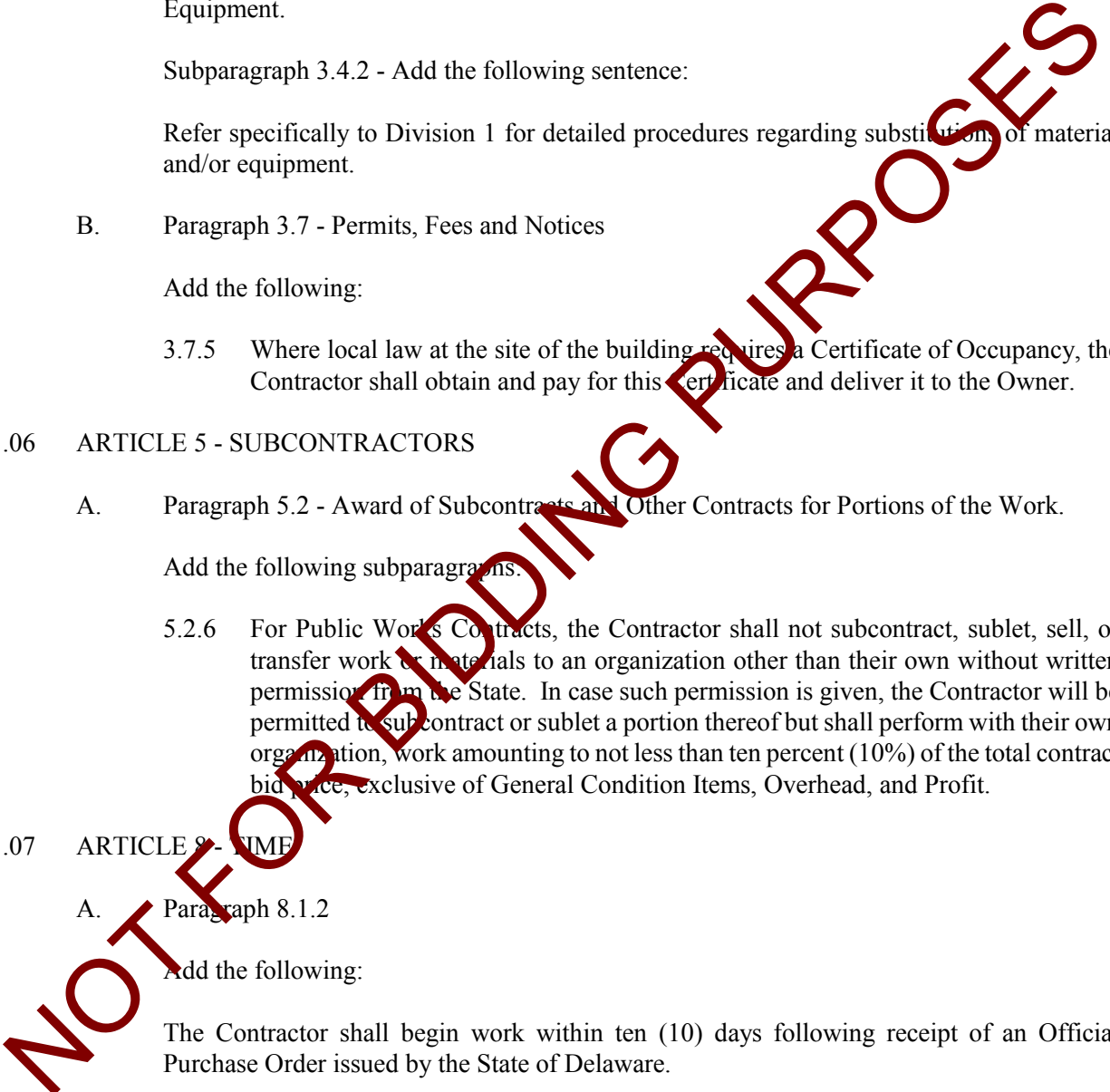
The Contractor shall begin work within ten (10) days following receipt of an Official Purchase Order issued by the State of Delaware.

1.08 ARTICLE 11 - INSURANCE

A. Paragraph 11.5 - Performance Bond and Payment Bond

Add the following subparagraphs:

11.5.3 Prior to delivery of the executed contract, the Contractor must deliver to the Owner an executed performance bond in the amount of 100% of the accepted bid as security



for the faithful performance of their contract and include the one year guarantee; and an executed labor and material payment bond in the amount of 100% of the accepted bid as security for the payment of all persons performing labor or furnishing materials in connection therewith and conditioned that the Contractor shall well and faithfully pay all daily labor employed by their firm for this contract in full once each week. Performance and payment bond may be in a combined form. The bonding company's standard forms are acceptable provided all coverage requirements are included. Consent of Surety must be included.

- 11.5.4 Bonds are to be in favor of the Owner and shall be paid for by the Contractor and furnished by a surety company licensed in the State of Delaware. The Owner has the right to demand proof that the parties signing the bonds are duly authorized to do so.

1.09 ARTICLE 15 - PREFERENCE FOR DELAWARE LABOR

- A. 15.1 The Contractor shall comply with the following provisions of **Delaware Code**, Title 29, Chapter 69, Section 6962:

In the construction of all public works for the State or any political subdivision or by persons contracting with the State or any political subdivision thereof, preference in employment of laborers, workmen or mechanics, shall be given to bona-fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State. Each Public works contract for the construction of public works for the State or any political subdivision thereof shall contain a stipulation that any person, company, or corporation who violates this Section shall pay a penalty to the Secretary of Finance equal to the amount of compensation paid to any person in violation of this section.

- 15.2 **Preference for Delaware Labor:** Surety bonds in the amount of 6% of the contract or subcontract price are required for all non-resident contractors for contracts within the State of Delaware in which either:

1. The single contract or subcontract totals \$20,000 or more; or
2. The contract or sub-contract is a "cost-plus" contract whose estimated cost - and - profit totals \$20,000 or more; or
3. The aggregate of two or more contracts or subcontracts in a calendar year totals \$20,000 or more.

The Division of Revenue will accept cash bonds, which may be paid by check on contracts not exceeding \$100,000.

The Contractor's bond shall be filed before construction commences on any contract upon which a bond is required, pursuant to Title 30 **Delaware Code** Chapter 375 as outlined above.

For licensing requirements, penalties, definitions, information filing and other requirements, bidders shall refer to Technical Information Memorandum 86-10 and

Code Sections 375, 2501 and 2503. For additional information, contact 1-800-292-7826.

#### 1.10 ARTICLE 16 - LICENSE, TAX AND STATE LAW REQUIREMENTS

- A. 16.1 In the performance of this Contract the successful bidder is required to comply with all applicable Federal, State and Local laws, ordinances, codes and regulations. The cost of permits, insurance, taxes and other relevant costs required in the performance of the Contract shall be borne by the successful bidder. All Delaware laws in reference to construction shall be as binding as though quoted in full herein and their application shall be fully adhered to by all parties affected hereby. The Contractor shall furnish upon request any or all of the referenced items.
- B. 16.2 All bidders shall be properly licensed and authorized to transact business in the State of Delaware as provided for in the Delaware Code Title 30, Chapter §2502 and in any and all Delaware Municipalities having jurisdiction to require such licensing within the geographic boundaries of the site (s) where the work is to be performed prior to the execution of any contract resulting from this bid. In the case of contracts in excess of \$50,000.00 which are competitively bid, such person shall have initiated the license application procedure required by this subsection with the Division of Revenue prior to, or in conjunction with, the submission of a bid on a contract, or in the case of a subcontractor, prior to the submission of a bid by the general contractor. Proof of such a license compliance shall be as determined by the Owner or their designee.
- C. 16.3 All bidders for public works projects shall insure that they have met all general contractor and/or subcontractor licensing requirements in accord with the requirement of Title 29 Chapter 6962 prior to submitting a bid.

#### 1.11 ARTICLE 19 - INDEMNIFICATION BY THE CONTRACTOR AND SUBCONTRACTORS

- A. 19.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, the Architect, the Consulting Engineers and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself including the loss of use resulting therefrom, and (2) is caused in whole or in part by a negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in the INDEMNIFICATION BY CONTRACTOR Article.

19.1.2 In any and all claims against the Owner, the Architect, and Consulting Engineers or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' or workmen's compensation acts, disability benefits acts or other employee benefit acts.

19.1.3.4 The obligations of the Contractor shall not extend to the liability of the Architect, the Consulting Engineers or their agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design or specifications or (2) the giving of or the failure to give directions or instructions by the Architect, the Consulting Engineers or their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

## 19.2 INDEMNIFICATION BY THE SUBCONTRACTORS

19.2.1 Contractor hereby covenants and agrees that it will include the following provisions in all subcontracts entered into by the contractor for performance of any and all portions of the work on the project:

(1) To the fullest extent permitted by law, the Subcontractor shall indemnify and hold harmless the Owner, the Architect, the Consulting Engineers and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Subcontractor may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation or indemnity which would otherwise exist as to any party or person described in the INDEMNIFICATION BY THE SUBCONTRACTORS Article.

a. In any and all claims against the Owner, the Architect, the Consulting Engineers or any of their agents or employees by any employee of the Subcontractor, anyone directly or indirectly employed by the Subcontractor or anyone for whose acts the Subcontractor may be liable, the indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or the Subcontractor under workers' or workmen's compensation acts, disability benefits acts or other employee benefit acts.

- b. The obligation of the Subcontractor under this Article shall not extend to the liability of the Architect, the Consulting Engineers, their agents or employees, arising out of (1) the preparation of approval of maps, drawings, opinions, reports, surveys, change orders, design or specifications, or (2) the giving of or the failure to give direction of instructions by the Architect, the Consulting Engineers, their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

END OF SECTION

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**SECTION 00 73 46**

**DELAWARE PREVAILING WAGE RATES**

State of Delaware, Department of Labor, Prevailing Wages. Provided in accordance with Delaware's Prevailing Wage Regulations.

**NOT FOR BIDDING PURPOSES**

STATE OF DELAWARE  
 DEPARTMENT OF LABOR  
 DIVISION OF INDUSTRIAL AFFAIRS  
 OFFICE OF LABOR LAW ENFORCEMENT  
 PHONE: (302) 451-3423

Mailing Address:  
 4425 North Market St. 3rd FL  
 Wilmington, DE 19802

Located at:  
 4425 North Market St. 3rd FL  
 Wilmington, DE 19802

PREVAILING WAGES FOR BUILDING CONSTRUCTION EFFECTIVE MARCH 15, 2017

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	22.86	28.16	40.98
BOILERMAKERS	68.44	34.72	51.05
BRICKLAYERS	51.99	51.99	51.99
CARPENTERS	53.81	53.11	42.77
CEMENT FINISHERS	72.28	48.72	22.17
ELECTRICAL LINE WORKERS	45.47	28.99	29.73
ELECTRICIANS	66.85	66.85	66.85
ELEVATOR CONSTRUCTORS	90.49	64.49	31.94
GLAZIERS	71.20	71.20	56.66
INSULATORS	55.48	55.48	55.48
IRON WORKERS	62.85	62.85	62.85
LABORERS	44.70	44.70	44.70
MILLWRIGHTS	69.18	69.18	55.75
PAINTERS	48.47	48.47	48.47
PILEDRIVERS	75.27	39.35	31.83
PLASTERERS	29.84	29.84	22.12
PLUMBERS/PIPEFITTERS/STEAMFITTERS	65.95	51.49	57.01
POWER EQUIPMENT OPERATORS	67.29	67.29	43.83
ROOFERS-COMPOSITION	24.01	23.70	21.64
ROOFERS-SHINGLE/SLATE/TILE	18.39	21.86	17.19
SHEET METAL WORKERS	67.03	67.03	67.03
SOFT FLOOR LAYERS	51.12	51.12	51.12
SPRINKLER FITTERS	57.29	57.29	57.29
TERRAZZO/MARBLE/TILE FINISHERS	57.72	57.72	47.51
TERRAZZO/MARBLE/TILE SETTERS	66.02	66.02	55.02
TRUCK DRIVERS	28.75	27.44	20.94

CERTIFIED: 11/17/17

BY:   
 ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 761-8200

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: ETB Building Roof Replacement - Delaware Technical Community College, Kent County

**PREVAILING WAGE DEBARMENT LIST**

The following contractors have been debarred for violations of the prevailing wage law 29Del.C. §6960 or other applicable State statutes.

Therefore, no public construction contract in this State shall be bid on, awarded to, or received by contractors and individuals on this list for a period of (3) three years from the date of the judgment or as deemed by a court of competent jurisdiction.

<b>Contractor</b>	<b>Address</b>	<b>Date of Debarment</b>
Mullen Brothers, Inc. and Daniel Mullen, individually	3375 Garnett Road, Boothwyn, PA 19060	Indefinite/ Civil Contempt
MMR Associates DBA Peninsula Glass and Michael Rooney, individually	679 Horse Pond Road, Dover, DE 19901	1/20/2015
Site Work Safety Supplies, Inc. and Peter Coker, individually	4020 Seven Hickories Road Dover, DE 19904	1/12/2016
Green Granite and Jason Green, individually	604 Heatherbrooke Court Avondale, PA 19311	Indefinite/ Civil Contempt
Pro Image Landscaping, Inc. and Owner(s) individually	23 Commerce Street Wilmington, DE 19801 and/or 2 Cameo Road Claymont, DE 19703	Indefinite/19 Del.C. §108 & 10 Del.C. 542(c)
Liberty Mechanical, LLC and Owner(s), individually	2032 Duncan Road Wilmington, DE 19801	Indefinite/ 19 Del.C. 2374(f)
Integrated Mechanical and Fire Systems Inc. and Allison Sheldon, individually	4601 Governor Printz Boulevard Wilmington, DE 19809	Indefinite/19 Del.C. §108 & 10 Del.C. 542(c)

Updated: May 11, 2017

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## GENERAL REQUIREMENTS

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12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

**NOT FOR BIDDING PURPOSES**

**1.1 CONTRACT DOCUMENTS**

1.1.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to an extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

1.1.2 Work including material purchases shall not begin until the Contractor is in receipt of a bonafide State of Delaware Purchase Order. Any work performed or material purchases prior to the issuance of the Purchase Order is done at the Contractor's own risk and cost.

**1.2 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS**

1.2.1 For Public Works Projects financed in whole or in part by state appropriation the Contractor agrees that during the performance of this contract:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, sex, color, sexual orientation, gender identity or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting agency setting forth this nondiscrimination clause.
2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, sex, color, sexual orientation, gender identity or national origin."

**ARTICLE 2: OWNER**

(NO ADDITIONAL GENERAL REQUIREMENTS – SEE SUPPLEMENTARY GENERAL CONDITIONS)

**ARTICLE 3: CONTRACTOR**

3.1 Schedule of Values: The successful Bidder shall within twenty (20) days after receiving notice to proceed with the work, furnish to the Owner a complete schedule of values on the various items comprising the work.

3.2 Subcontracts: Upon approval of Subcontractors, the Contractor shall award their Subcontracts as soon as possible after the signing of their own contract and see that all material, their own and those of their Subcontractors, are promptly ordered so that the work will not be delayed by failure of materials to arrive on time.

3.3 Before commencing any work or construction, the General Contractor is to consult with the Owner as to matters in connection with access to the site and the allocation of Ground Areas for the various features of hauling, storage, etc.

- 3.4 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, unless the Contract Documents give other specific instructions.
- 3.5 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
- 3.6 The Contractor warrants to the Owner that materials and equipment furnished will be new and of good quality, unless otherwise permitted, and that the work will be free from defects and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved, may be considered defective. If required by the Owner, the Contractor shall furnish evidence as to the kind and quality of materials and equipment provided.
- 3.7 Unless otherwise provided, the Contractor shall pay all sales, consumer, use and other similar taxes, and shall secure and pay for required permits, fees, licenses, and inspections necessary for proper execution of the Work.
- 3.8 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the Owner if the Drawings and Specifications are observed to be at variance therewith.
- 3.9 The Contractor shall be responsible to the Owner for the acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under contract with the Contractor.
- 3.10 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall be responsible for returning all damaged areas to their original conditions.
- 3.11 STATE LICENSE AND TAX REQUIREMENTS
- 3.11.1 Each Contractor and Subcontractor shall be licensed to do business in the State of Delaware and shall pay all fees and taxes due under State laws. In conformance with Section 2503, Chapter 25, Title 30, Delaware Code, "the Contractor shall furnish the Delaware Department of Finance within ten (10) days after entering into any contract with a contractor or subcontractor not a resident of this State, a statement of total value of such contract or contracts together with the names and addresses of the contracting parties."
- 3.12 The Contractor shall comply with all requirements set forth in Section 6962, Chapter 69, Title 29 of the Delaware Code.
- 3.13 During the contract Work, the Contractor and each listed Subcontractor, shall implement an Employee Drug Testing Program in accordance with OMB Regulation 4104- "Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on "Large Public Works Projects". "Large Public Works" is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.

**ARTICLE 4: ADMINISTRATION OF THE CONTRACT**

## 4.1 CONTRACT SURETY

## 4.1.1 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

4.1.2 All bonds will be required as follows unless specifically waived elsewhere in the Bidding Documents.

4.1.3 Contents of Performance Bonds – The bond shall be in the form approved by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the proposal, plans, specifications, and bid documents thereof. Each term and condition shall be met at the time and in the manner prescribed by the Contract, Bid documents and the specifications, including the payment in full to every person furnishing material or performing labor in the performance of the Contract, of all sums of money due the person for such labor and material. (The bond shall also contain the successful bidder's guarantee to indemnify and save harmless the State and the agency from all costs, damages and expenses growing out of or by reason of the Contract in accordance with the Contract.)

4.1.4 Invoking a Performance Bond – The agency may, when it considers that the interest of the State so require, cause judgement to be confessed upon the bond.

4.1.5 Within twenty (20) days after the date of notice of award of contract, the Bidder to whom the award is made shall furnish a Performance Bond and Labor and Material Payment Bond, each equal to the full amount of the Contract price to guarantee the faithful performance of all terms, covenants and conditions of the same. The bonds are to be issued by an acceptable Bonding Company, licensed to do business in the State of Delaware and shall be issued in duplicate.

4.1.6 Performance and Payment Bonds shall be maintained in full force (warranty bond) for a period of two (2) years after the date of the Certificate for Final Payment. The Performance Bond shall guarantee the satisfactory completion of the Project and that the Contractor will make good any faults or defects in his work which may develop during the period of said guarantees as a result of improper or defective workmanship, material or apparatus, whether furnished by themselves or their Sub-Contractors. The Payment Bond shall guarantee that the Contractor shall pay in full all persons, firms or corporations who furnish labor or material or both labor and material for, or on account of, the work included herein. The bonds shall be paid for by this Contractor. The Owner shall have the right to demand that the proof parties signing the bonds are duly authorized to do so.

## 4.2 FAILURE TO COMPLY WITH CONTRACT

4.2.1 If any firm entering into a contract with the State, or Agency that neglects or refuses to perform or fails to comply with the terms thereof, the Agency which signed the Contract may terminate the Contract and proceed to award a new contract in accordance with this Chapter 69, Title 29 of the Delaware Code or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond. Nothing herein shall preclude the Agency from pursuing additional remedies as otherwise provided by law.

## 4.3 CONTRACT INSURANCE AND CONTRACT LIABILITY



4.3.1 In addition to the bond requirements stated in the Bid Documents, each successful Bidder shall purchase adequate insurance for the performance of the Contract and, by submission of a Bid, agrees to indemnify and save harmless and to defend all legal or equitable actions brought against the State, any Agency, officer and/or employee of the State, for and from all claims of liability which is or may be the result of the successful Bidder's actions during the performance of the Contract.

4.3.2 The purchase or nonpurchase of such insurance or the involvement of the successful Bidder in any legal or equitable defense of any action brought against the successful Bidder based upon work performed pursuant to the Contract will not waive any defense which the State, its agencies and their respective officers, employees and agents might otherwise have against such claims, specifically including the defense of sovereign immunity, where applicable, and by the terms of this section, the State and all agencies, officers and employees thereof shall not be financially responsible for the consequences of work performed, pursuant to said contract.

#### 4.4 RIGHT TO AUDIT RECORDS

4.4.1 The Owner shall have the right to audit the books and records of a Contractor or any Subcontractor under any Contract or Subcontract to the extent that the books and records relate to the performance of the Contract or Subcontract.

4.4.2 Said books and records shall be maintained by the Contractor for a period of seven (7) years from the date of final payment under the Prime Contract and by the Subcontractor for a period of seven (7) years from the date of final payment under the Subcontract.

### ARTICLE 5: SUBCONTRACTORS

#### 5.1 SUBCONTRACTING REQUIREMENTS

5.1.1 All contracts for the construction, reconstruction, alteration or repair of any public building (not a road, street or highway) shall be subject to the following provisions:

1. A contract shall be awarded only to a Bidder whose Bid is accompanied by a statement containing, for each Subcontractor category, the name and address (city or town and State only – street number and P.O. Box addresses not required) of the subcontractor whose services the Bidder intends to use in performing the Work and providing the material for such Subcontractor category.
2. A Bid will not be accepted nor will an award of any Contract be made to any Bidder which, as the Prime Contractor, has listed itself as the Subcontractor for any Subcontractor unless:
  - A. It has been established to the satisfaction of the awarding Agency that the Bidder has customarily performed the specialty work of such Subcontractor category by artisans regularly employed by the Bidder's firm;
  - B. That the Bidder is duly licensed by the State to engage in such specialty work, if the State requires licenses; and
  - C. That the Bidder is recognized in the industry as a bona fide Subcontractor or Contractor in such specialty work and Subcontractor category.

- 5.1.2 The decision of the awarding Agency as to whether a Bidder who list itself as the Subcontractor for a Subcontractor category shall be final and binding upon all Bidders, and no action of any nature shall lie against any awarding agency or its employees or officers because of its decision in this regard.
- 5.1.3 After such a Contract has been awarded, the successful Bidder shall not substitute another Subcontractor for any Subcontractor whose name was set forth in the statement which accompanied the Bid without the written consent of the awarding Agency.
- 5.1.4 No Agency shall consent to any substitution of Subcontractors unless the Agency is satisfied that the Subcontractor whose name is on the Bidders accompanying statement:
- A. Is unqualified to perform the work required;
  - B. Has failed to execute a timely reasonable Subcontract;
  - C. Has defaulted in the performance on the portion of the work covered by the Subcontract; or
  - D. Is no longer engaged in such business.
- 5.1.5 Should a Bidder be awarded a contract, such successful Bidder shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.
- 5.2 PENALTY FOR SUBSTITUTION OF SUBCONTRACTORS
- 5.2.1 Should the Contractor fail to utilize any or all of the Subcontractors in the Contractor's Bid statement in the performance of the Work on the public bidding, the Contractor shall be penalized in the amount of (project specific amount\*). The Agency may determine to deduct payments of the penalty from the Contractor or have the amount paid directly to the Agency. Any penalty amount assessed against the Contractor may be remitted or refunded, in whole or in part, by the Agency awarding the Contract, only if it is established to the satisfaction of the Agency that the Subcontractor in question has defaulted or is no longer engaged in such business. No claim for the remission or refund of any penalty shall be granted unless an application is filed within one year after the liability of the successful Bidder accrues. All penalty amounts assessed and not refunded or remitted to the contractor shall be reverted to the State.
- \*one (1) percent of contract amount not to exceed \$10,000
- 5.3 ASBESTOS ABATEMENT
- 5.3.1 The selection of any Contractor to perform asbestos abatement for State-funded projects shall be approved by the Office of Management and Budget, Division of Facilities Management pursuant to Chapter 78 of Title 16.
- 5.4 STANDARDS OF CONSTRUCTION FOR THE PROTECTION OF THE PHYSICALLY HANDICAPPED

5.4.1 All Contracts shall conform with the standard established by the Delaware Architectural Accessibility Board unless otherwise exempted by the Board.

5.5 CONTRACT PERFORMANCE

5.5.1 Any firm entering into a Public Works Contract that neglects or refuses to perform or fails to comply with its terms, the Agency may terminate the Contract and proceed to award a new Contract or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond.

**ARTICLE 6: CONSTRUCTION BY OWNER OR SEPARATE CONTRACTORS**

6.1 The Owner reserves the right to simultaneously perform other construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other Projects at the same site.

6.2 The Contractor shall afford the Owner and other Contractors reasonable opportunity for access and storage of materials and equipment, and for the performance of their activities, and shall connect and coordinate their activities with other forces as required by the Contract Documents.

**ARTICLE 7: CHANGES IN THE WORK**

7.1 The Owner, without invalidating the Contract, may order changes in the Work consisting of Additions, Deletions, Modifications or Substitutions, with the Contract Sum and Contract completion date being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Professional, as the duly authorized agent, the Contractor and the Owner.

7.2 The Contract Sum and Contract Completion Date shall be adjusted only by a fully executed Change Order.

7.3 The additional cost or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor and the Architect. In all cases, this cost or credit shall be based on the 'DPE' wages required and the "invoice price" of the materials/equipment needed.

7.3.1 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes direct salary plus customary fringe benefits (prevailing wage rates) and documented statutory costs such as workman's compensation insurance, Social Security/Medicare, and unemployment insurance (a maximum multiplier of 1.35 times DPE).

7.3.2 "invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor, (or subcontractor), to a material distributor, direct factory vendor, store, material provider, or equipment leasing entity. Rates for equipment that is leased and/or owned by the Contractor or subcontractor(s) shall not exceed those listed in the latest version of the "Means Building Construction Cost Data" publication.

7.3.3 In addition to the above, the General Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the General Contractor's own forces. For additional subcontractor work, the Subcontractor is allowed a fifteen (15) percent overhead and profit on change order work above and beyond the direct costs stated previously. To this amount, the General Contractor will be allowed a mark-up not exceeding seven and one half percent (7.5%) on the subcontractors work. These mark-

ups shall include all costs including, but not limited to: overhead, profit, bonds, insurance, supervision, etc. No markup is permitted on the work of the subcontractors subcontractor. No additional costs shall be allowed for changes related to the Contractor's onsite superintendent/staff, or project manager, unless a change in the work changes the project duration and is identified by the CPM schedule. There will be no other costs associated with the change order.

#### ARTICLE 8: TIME

8.1 Time limits, if any, are as stated in the Project Manual. By executing the Agreement, the Contractor confirms that the stipulated limits are reasonable, and that the Work will be completed within the anticipated time frame.

8.2 If progress of the Work is delayed at any time by changes ordered by the Owner, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions, unavoidable casualties or other causes beyond the Contractor's control, the Contract Time shall be extended for such reasonable time as the Owner may determine.

8.3 Any extension of time beyond the date fixed for completion of the construction and acceptance of any part of the Work called for by the Contract, or the occupancy of the building by the Owner, in whole or in part, previous to the completion shall not be deemed a waiver by the Owner of his right to annul or terminate the Contract for abandonment or delay in the matter provided for, nor relieve the Contractor of full responsibility.

#### 8.4 SUSPENSION AND DEBARMENT

8.4.1 Per Section 6962(d)(14), Title 29, Delaware Code, "Any Contractor who fails to perform a public works contract or complete a public works project within the time schedule established by the Agency in the Invitation To Bid, may be subject to Suspension or Debarment for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the Project."

8.4.2 "Upon such failure for any of the above stated reasons, the Agency that contracted for the public works project may petition the Director of the Office of Management and Budget for Suspension or Debarment of the Contractor. The Agency shall send a copy of the petition to the Contractor within three (3) working days of filing with the Director. If the Director concludes that the petition has merit, the Director shall schedule and hold a hearing to determine whether to suspend the Contractor, debar the Contractor or deny the petition. The Agency shall have the burden of proving, by a preponderance of the evidence, that the Contractor failed to perform or complete the public works project within the time schedule established by the Agency and failed to do so for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the project. Upon a finding in favor of the Agency, the Director may suspend a Contractor from Bidding on any project funded, in whole or in part, with public funds for up to 1 year for a first offense, up to 3 years for a second offense and permanently debar the Contractor for a third offense. The Director shall issue a written decision and shall send a copy to the Contractor and the Agency. Such decision may be appealed to the Superior Court within thirty (30) days for a review on the record."

#### 8.5 RETAINAGE

8.5.1 Per Section 6962(d)(5) a.3, Title 29, Delaware Code: The Agency may at the beginning of each public works project establish a time schedule for the completion of the project. If the project is delayed beyond the completion date due to the Contractor's failure to meet

their responsibilities, the Agency may forfeit, at its discretion, all or part of the Contractor's retainage.

- 8.5.2 This forfeiture of retainage also applies to the timely completion of the punchlist. A punchlist will only be prepared upon the mutual agreement of the Owner, Architect and Contractor. Once the punchlist is prepared, all three parties will by mutual agreement, establish a schedule for its completion. Should completion of the punchlist be delayed beyond the established date due to the Contractor's failure to meet their responsibilities, the Agency may hold permanently, at its discretion, all or part of the Contractor's retainage.

## **ARTICLE 9: PAYMENTS AND COMPLETION**

### **9.1 APPLICATION FOR PAYMENT**

- 9.1.1 Applications for payment shall be made upon AIA Document G702. There will be a five percent (5%) retainage on all Contractor's monthly invoices until completion of the project. This retainage may become payable upon receipt of all required closeout documentation, provided all other requirements of the Contract Documents have been met.
- 9.1.2 A date will be fixed for the taking of the monthly account of work done. Upon receipt of Contractor's itemized application for payment, such application will be audited, modified, if found necessary, and approved for the amount. Statement shall be submitted to the Owner.
- 9.1.3 Section 6516, Title 29 of the Delaware Code, annualized interest is not to exceed 12% per annum beginning thirty (30) days after the "presentation" (as opposed to the date) of the invoice.

### **9.2 PARTIAL PAYMENTS**

- 9.2.1 Any public works Contract executed by any Agency may provide for partial payments at the option of the Owner with respect to materials placed along or upon the sites or stored at secured locations, which are suitable for use in the performance of the contract.
- 9.2.2 When approved by the agency, partial payment may include the values of tested and acceptable materials of a nonperishable or noncontaminative nature which have been produced or furnished for incorporation as a permanent part of the work yet to be completed, provided acceptable provisions have been made for storage.
- 9.2.2.1 Any allowance made for materials on hand will not exceed the delivered cost of the materials as verified by invoices furnished by the Contractor, nor will it exceed the contract bid price for the material complete in place.
- 9.2.3 If requested by the Agency, receipted bills from all Contractors, Subcontractors, and material, men, etc., for the previous payment must accompany each application for payment. Following such a request, no payment will be made until these receipted bills have been received by the Owner.

### **9.3 SUBSTANTIAL COMPLETION**

- 9.3.1 When the building has been made suitable for occupancy, but still requires small items of miscellaneous work, the Owner will determine the date when the project has been substantially completed.
- 9.3.2 If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and without terminating the Contract, the Owner

may make payment of the balance due for the portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment that it shall not constitute a waiver of claims.

9.3.3 On projects where commissioning is included, the commissioning work as defined in the specifications must be complete prior to the issuance of substantial completion.

#### 9.4 FINAL PAYMENT

9.4.1 Final payment, including the five percent (5%) retainage if determined appropriate shall be made within thirty (30) days after the Work is fully completed and the Contract fully performed and provided that the Contractor has submitted the following closeout documentation (in addition to any other documentation required elsewhere in the Contract Documents):

9.4.1.1 Evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid,

9.4.1.2 An acceptable RELEASE OF LIENS,

9.4.1.3 Copies of all applicable warranties,

9.4.1.4 As-built drawings,

9.4.1.5 Operations and Maintenance Manuals,

9.4.1.6 Instruction Manuals,

9.4.1.7 Consent of Surety to final payment

9.4.1.8 The Owner reserves the right to retain payments, or parts thereof, for its protection until the foregoing conditions have been complied with, defective work corrected and all unsatisfactory conditions remedied.

#### ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 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 take all reasonable precautions to prevent damage, injury or loss to: workers, persons nearby who may be affected, the Work, materials and equipment to be incorporated, and existing property at the site or adjacent thereto. The Contractor shall give notices and comply with applicable laws ordinances, rules regulations, and lawful orders of public authorities bearing on the safety of persons and property and their protection from injury, damage, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

10.2 The Contractor shall notify the Owner in the event any existing hazardous material such as lead, PCBs, asbestos, etc. is encountered on the project. The Owner will arrange with a qualified specialist for the identification, testing, removal, handling and protection against exposure or environmental pollution, to comply with applicable regulation laws and ordinances. The Contractor and Architect will not be required to participate in or to perform this operation. Upon completion of this work, the Owner will notify the Contractor and Architect in writing the area has been cleared and approved by the authorities in order for the work to proceed. The Contractor shall attach documentation from the authorities of said approval.



- 10.3 As required in the Hazardous Chemical Information Act of June 1984, all vendors supplying any materials that may be defined as hazardous, must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a warning caution on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in any foreseeable emergency situation. Material Safety Data Sheets must be provided directly to the Owner along with the shipping slips that include those products.
- 10.4 The Contractor shall certify to the Owner that materials incorporated into the Work are free of all asbestos. This certification may be in the form of Material Safety Data Sheet (MSDS) provided by the product manufacturer for the materials used in construction, as specified or as provided by the Contractor.

#### **ARTICLE 11: INSURANCE AND BONDS**

- 11.1 The Contractor shall carry all insurance required by law, such as Unemployment Insurance, etc. The Contractor shall carry such insurance coverages as they desire on their own property such as a field office, storage sheds or other structures erected upon the project site that belong to them and for their own use. The Subcontractors involved with this project shall carry whatever insurance protection they consider necessary to cover the loss of any of their personal property, etc.
- 11.2 Upon being awarded the Contract, the Contractor shall obtain a minimum of two (2) copies of all required insurance certificates called for herein, and submit one (1) copy of each certificate, to the Owner, within 20 days of contract award.
- 11.3 Bodily Injury Liability and Property Damage Liability Insurance shall, in addition to the coverage included herein, include coverage for injury to or destruction of any property arising out of the collapse of or structural injury to any building or structure due to demolition work and evidence of these coverages shall be filed with and approved by the Owner.
- 11.4 The Contractor's Property Damage Liability Insurance shall, in addition to the coverage noted herein, include coverage on all real and personal property in their care, custody and control damaged in any way by the Contractor or their Subcontractors during the entire construction period on this project.
- 11.5 Builders Risk (including Standard Extended Coverage Insurance) on the existing building during the entire construction period, shall not be provided by the Contractor under this contract. The Owner shall insure the existing building and all of its contents and all this new alteration work under this contract during entire construction period for the full insurable value of the entire work at the site. Note, however, that the Contractor and their Subcontractors shall be responsible for insuring building materials (installed and stored) and their tools and equipment whenever in use on the project, against fire damage, theft, vandalism, etc.
- 11.6 Certificates of the insurance company or companies stating the amount and type of coverage, terms of policies, etc., shall be furnished to the Owner, within 20 days of contract award.
- 11.7 The Contractor shall, at their own expense, (in addition to the above) carry the following forms of insurance:

11.7.1 Contractor's Contractual Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000 \$1,000,000 \$1,000,000	for each person for each occurrence aggregate
Property Damage	\$500,000 \$1,000,000	for each occurrence aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000 \$1,000,000 \$1,000,000	for each person for each occurrence aggregate
Property Damage	\$500,000 \$500,000	for each occurrence aggregate

11.7.3 Automobile Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000 \$1,000,000	for each person for each occurrence
Property Damage	\$500,000	per accident

11.7.4 Prime Contractor's and Subcontractors' policies shall include contingent and contractual liability coverage in the same minimum amounts as 11.7.1 above.

11.7.5 Workmen's Compensation (including Employer's Liability):

11.7.5.1 Minimum Limit on employer's liability to be as required by law.

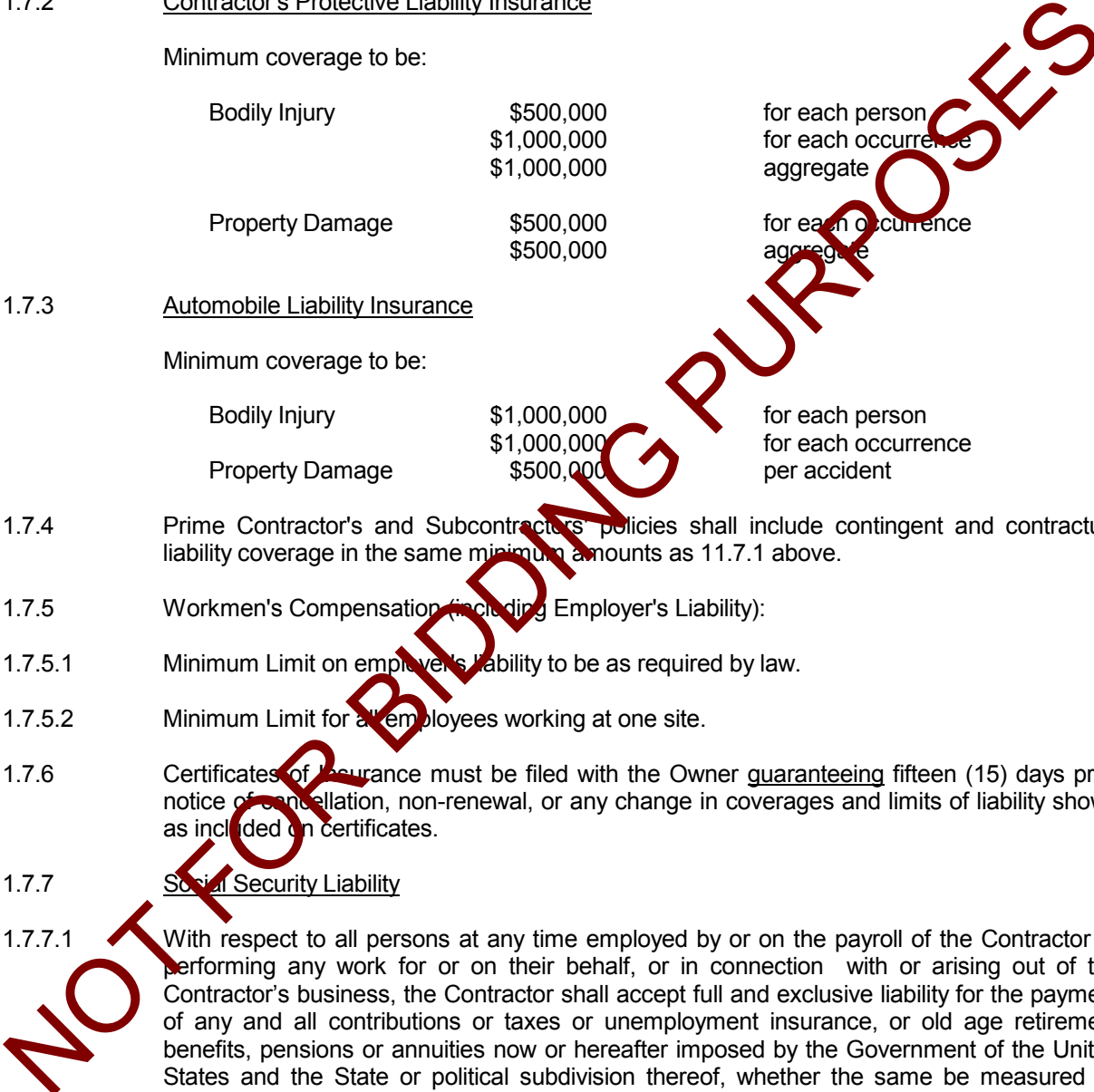
11.7.5.2 Minimum Limit for all employees working at one site.

11.7.6 Certificates of Insurance must be filed with the Owner guaranteeing fifteen (15) days prior notice of cancellation, non-renewal, or any change in coverages and limits of liability shown as included on certificates.

11.7.7 Social Security Liability

11.7.7.1 With respect to all persons at any time employed by or on the payroll of the Contractor or performing any work for or on their behalf, or in connection with or arising out of the Contractor's business, the Contractor shall accept full and exclusive liability for the payment of any and all contributions or taxes or unemployment insurance, or old age retirement benefits, pensions or annuities now or hereafter imposed by the Government of the United States and the State or political subdivision thereof, whether the same be measured by wages, salaries or other remuneration paid to such persons or otherwise.

11.7.7.2 Upon request, the Contractor shall furnish Owner such information on payrolls or employment records as may be necessary to enable it to fully comply with the law imposing the aforesaid contributions or taxes.





- 11.7.7.3 If the Owner is required by law to and does pay any and/or all of the aforesaid contributions or taxes, the Contractor shall forthwith reimburse the Owner for the entire amount so paid by the Owner.

#### **ARTICLE 12: UNCOVERING AND CORRECTION OF WORK**

- 12.1 The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any Work found to be not in accordance with the requirements of the Contract Documents within a period of two years from the date of Substantial Completion, or by terms of an applicable special warranty required by the Contract Documents. The provisions of this Article apply to work done by Subcontractors as well as to Work done by direct employees of the Contractor.
- 12.2 At any time during the progress of the work, or in any case where the nature of the defects shall be such that it is not expedient to have them corrected, the Owner, at their option, shall have the right to deduct such sum, or sums, of money from the amount of the contract as they consider justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

#### **ARTICLE 13: MISCELLANEOUS PROVISIONS**

##### **13.1 CUTTING AND PATCHING**

- 13.1.1 The Contractor shall be responsible for all cutting and patching. The Contractor shall coordinate the work of the various trades involved.

##### **13.2 DIMENSIONS**

- 13.2.1 All dimensions shown shall be verified by the Contractor by actual measurements at the project site. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Owner for adjustment before any work affected thereby has been performed.

##### **13.3 LABORATORY TESTS**

- 13.3.1 Any specified laboratory tests of material and finished articles to be incorporated in the work shall be made by bureaus, laboratories or agencies approved by the Owner and reports of such tests shall be submitted to the Owner. The cost of the testing shall be paid for by the Contractor.

- 13.3.2 The Contractor shall furnish all sample materials required for these tests and shall deliver same without charge to the testing laboratory or other designated agency when and where directed by the Owner.

##### **13.4 ARCHAEOLOGICAL EVIDENCE**

- 13.4.1 Whenever, in the course of construction, any archaeological evidence is encountered on the surface or below the surface of the ground, the Contractor shall notify the authorities of the State Historic Preservation Office and suspend work in the immediate area for a reasonable time to permit those authorities, or persons designated by them, to examine the area and ensure the proper removal of the archaeological evidence for suitable preservation by the Division of Historical and Cultural Affairs.

## 13.5 GLASS REPLACEMENT AND CLEANING

13.5.1 The General Contractor shall replace without expense to the Owner all glass broken during the construction of the project. If job conditions warrant, at completion of the job the General Contractor shall have all glass cleaned and polished.

## 13.6 WARRANTY

13.6.1 For a period of two (2) years from the date of substantial completion, as evidenced by the date of final acceptance of the work, the contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect of equipment, material or workmanship performed by the contractor or any of his subcontractors or suppliers. However, manufacturer's warranties and guarantees, if for a period longer than two (2) years, shall take precedence over the above warranties. The contractor shall remedy, at his own expense, any such failure to conform or any such defect. The protection of this warranty shall be included in the Contractor's Performance Bond.

**ARTICLE 14: TERMINATION OF CONTRACT**

14.1 If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the costs of finishing the Work exceed any unpaid compensation due the Contractor, the Contractor shall pay the difference to the Owner.

14.2 "If the continuation of this Agreement is contingent upon the appropriation of adequate state, or federal funds, this Agreement may be terminated on the date beginning on the first fiscal year for which funds are not appropriated or at the exhaustion of the appropriation. The Owner may terminate this Agreement by providing written notice to the parties of such non-appropriation. All payment obligations of the Owner will cease upon the date of termination. Notwithstanding the foregoing, the Owner agrees that it will use its best efforts to obtain approval of necessary funds to continue the Agreement by taking appropriate action to request adequate funds to continue the Agreement."

END OF SECTION

**EMPLOYEE DRUG TESTING REPORT FORM**

**Period Ending:** \_\_\_\_\_

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds submit Testing Report Forms to the Owner no less than quarterly.

Project Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

Contractor/Subcontractor Name: \_\_\_\_\_

Contractor/Subcontractor Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Number of employees who worked on the jobsite during the report period: \_\_\_\_\_

Number of employees subject to random testing during the report period: \_\_\_\_\_

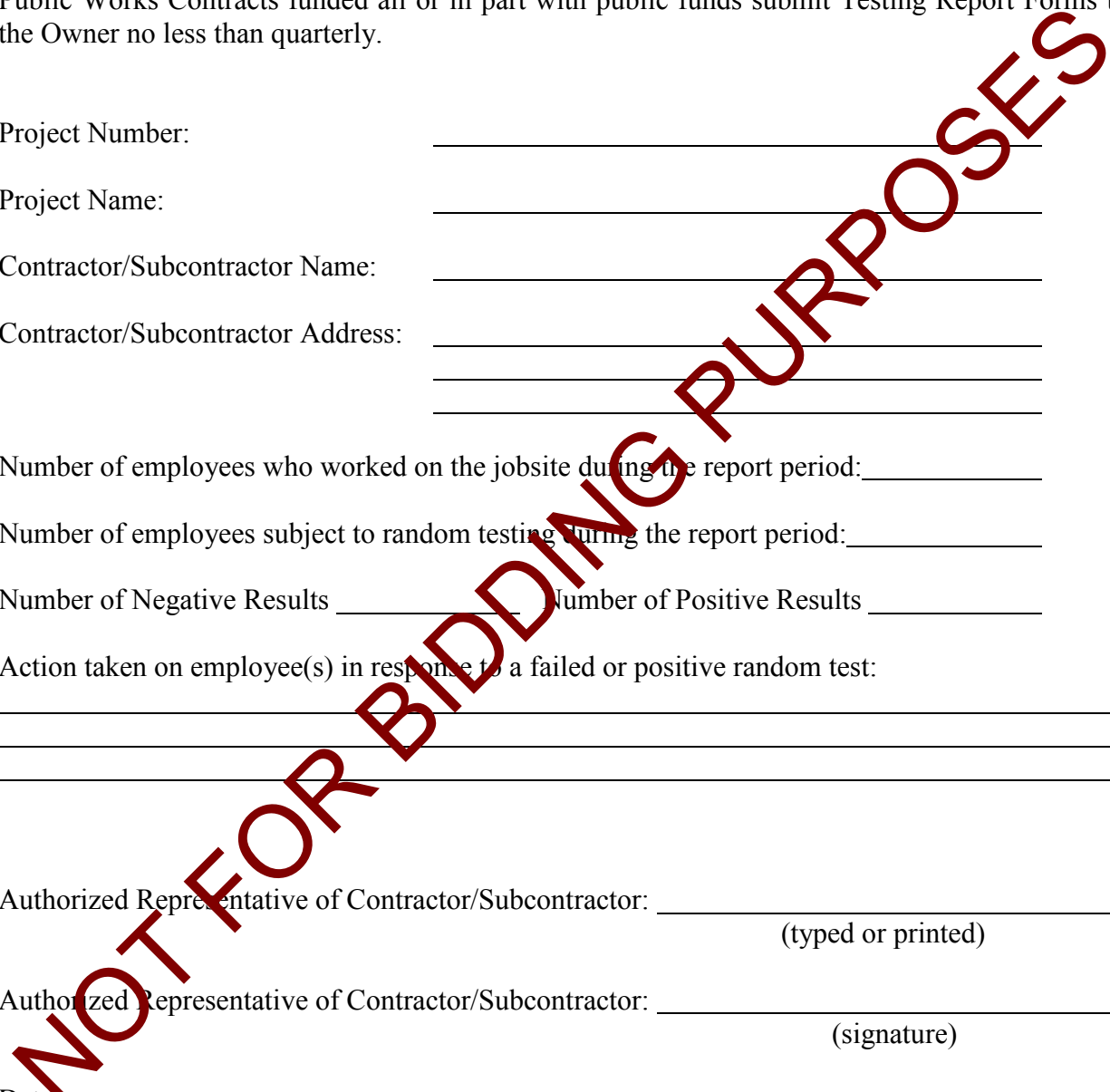
Number of Negative Results \_\_\_\_\_ Number of Positive Results \_\_\_\_\_

Action taken on employee(s) in response to a failed or positive random test:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Authorized Representative of Contractor/Subcontractor: \_\_\_\_\_  
(typed or printed)

Authorized Representative of Contractor/Subcontractor: \_\_\_\_\_  
(signature)

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



**EMPLOYEE DRUG TESTING  
REPORT OF POSITIVE RESULTS**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds to notify the Owner in writing of a positive random drug test.

Project Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

Contractor/Subcontractor Name: \_\_\_\_\_

Contractor/Subcontractor Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name of employee with positive test result: \_\_\_\_\_

Last 4 digits of employee SSN: \_\_\_\_\_

Date test results received: \_\_\_\_\_

Action taken on employee in response to a positive test result:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

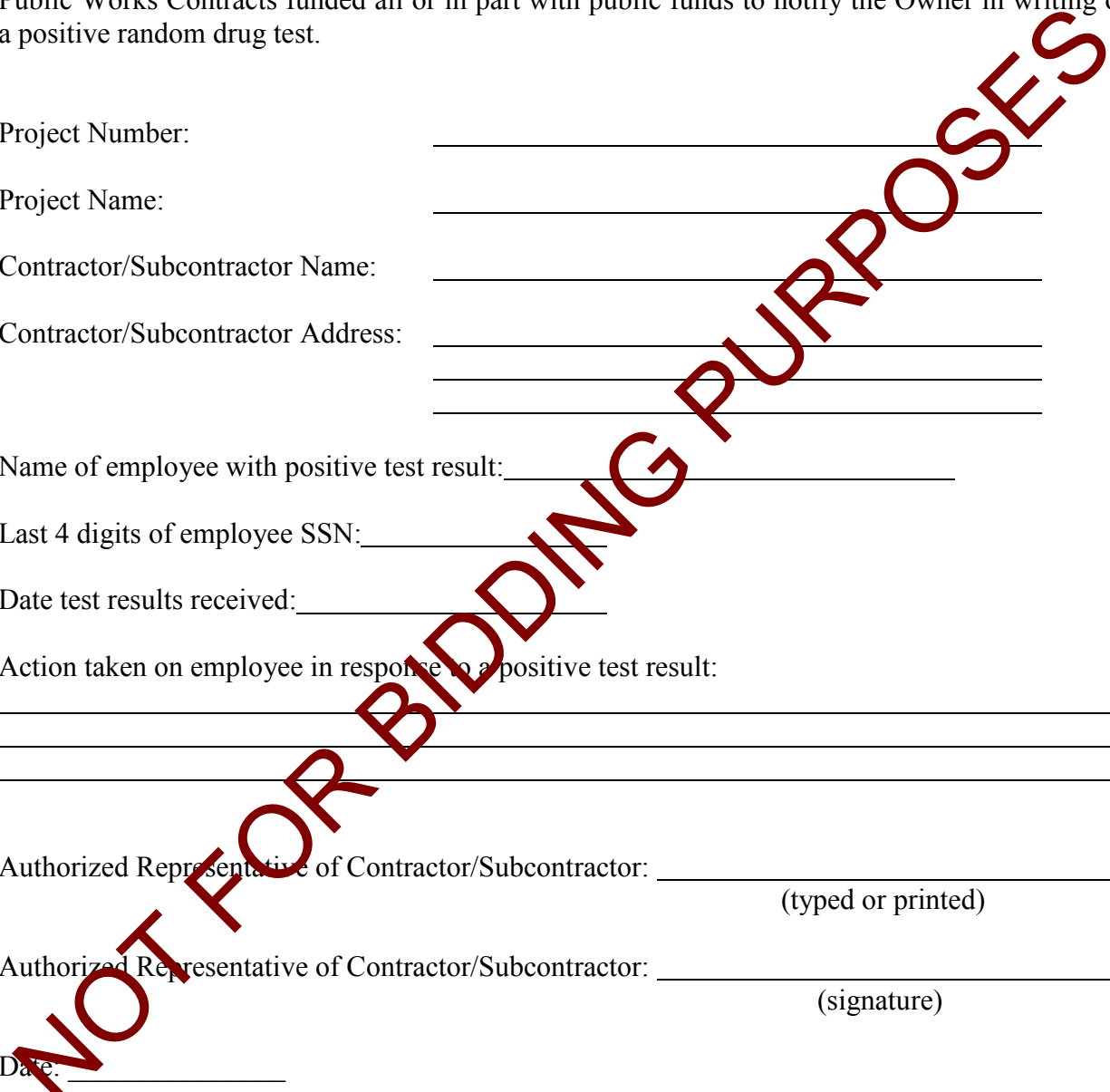
Authorized Representative of Contractor/Subcontractor: \_\_\_\_\_  
(typed or printed)

Authorized Representative of Contractor/Subcontractor: \_\_\_\_\_  
(signature)

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

**This form shall be sent by mail to the Owner within 24 hours of receipt of test results.**

**Enclose this test results form in a sealed envelope with the notation "Drug Testing Form – DO NOT OPEN" on the face thereof and place in a separate mailing envelope.**



SECTION 00 82 13

ADDITIONAL GENERAL CONTRACTING REQUIREMENTS

PART 1 GENERAL

1.01 GENERAL PROVISIONS

- A. APPLICABLE PROVISIONS of the entire Project Manual including Addenda shall govern this Section as fully as if repeated herein.

1.02 BIDDING AND CONTRACT DOCUMENTS

- A. Reference to specific sections of Bidding and Contract Documents further herein will be by Section number only.

1.03 WORK INCLUDED

- A. Briefly, and without force, it is the intent of this Project Manual and of the accompanying drawings that this Contractor shall provide the following:

Two Elevator Replacement

1.04 WORK NOT INCLUDED

- A. Asbestos Material: If material is encountered which may contain asbestos and must be disturbed, do not touch the material. Notify the Asbestos Section of the Division of Facilities Management in writing. Within fourteen (14) calendar days, the Division of Facilities Management will perform laboratory tests to determine if there is asbestos. If asbestos is not a danger, the Contractor will be directed to proceed without change. If the material is asbestos and must be handled, the Division of Facilities Management will direct a change.

1.05 SECURITY

- A. All wall openings must be secured and weather-proofed at the end of each work day.

- B. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with work. They shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

1. All employees on the work and other persons who may be affected thereby.
2. All work, materials and equipment to be incorporated therein.
3. Other property at the site or adjacent thereto.

- C. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. All damage or loss to any property or building materials shall be remedied by the Contractor no matter how such damage or loss is caused.

#### 1.06 MAJOR SUB-CONTRACTORS

- A. Refer to the Bid Form for the listing of Sub-Contractors and Addresses.
- B. For simplicity, all sub-contracts and sub-contractors will be referred to further herein as Contracts and Contractors respectively.

#### 1.07 DRAWINGS AND SPECIFICATIONS

- A. It is the intent of the specifications and drawings to include under each item all materials, apparatus and labor necessary to properly install, equip, adjust and put into perfect operation the respective portions of the installations specified and to so interconnect the various items or sections of the work as to form a complete and properly operating whole.
- B. Any apparatus, machinery, small items not mentioned in detail which may be found necessary to complete or perfect any portion of the installations in a substantial manner and in compliance with the requirements stated, implied or intended shall be furnished without extra cost to the Owner. This shall include all materials, devices or methods peculiar to the machinery, apparatus or systems furnished and installed by the Prime Contractor or any sub-contractor.
- C. In referring to drawings, figured dimensions take precedence over scale measurements. Discrepancies must be referred to the Engineer for decision. Each Contractor shall certify and verify all dimensions before ordering material or commencing work.
- D. Any work called for in the specifications but not mentioned or shown on the drawings, or called for in the drawings but not mentioned in the specifications, shall be provided as though called for in both.
- E. When any device or part of equipment is referred to herein in the singular number, such as "the pump" such reference shall be deemed to apply to as many such devices as required to complete the installation.
- F. The term "Provide" shall mean "Furnish and Install". Neither term will be used generally in these specifications, but will be assumed. The term "Furnish" shall mean to obtain and deliver on the job for installation by other trades.

#### 1.08 CONTINUITY OF SERVICES

- A. Continuous operation of basic services of these facilities during the construction is mandatory. This specifically includes space heating, telephone, storm sewer, domestic hot and cold water services, electrical services, and all security systems.

- B. No action shall be taken by these Contractors that will interrupt any of the existing building services or systems unless previous arrangements have been made five (5) days in advance with the Owner or an authorized representative.
- C. Should any Contractor inadvertently interrupt any service, they shall immediately furnish all labor, including overtime, material and equipment necessary for prompt restoration of such service and/or system at no additional cost to the Owner.

1.09 METHOD OF PROCEDURE

- A. The drawings accompanying these specifications are diagrammatic and intended to cover the approximate and relative location of all material, equipment and systems.
- B. Installation, connection and interconnection of all components of these systems shall be complete and made in accordance with the manufacturers instructions and best practices.
- C. Each Contractor shall erect all parts of equipment to be furnished by them under their contract at such time and in such manner as not to delay or interfere with other Contractors on the job.
- D. All piping and conduit shall be plugged as required during construction to prevent entrance of dirt and other foreign objects.
- E. Before material is ordered or any work performed, each Contractor shall verify all measurements, including lines, grades, pipes and conduit work elevations at the building and shall be responsible for the correctness thereof. No extra compensation will be allowed on account of differences between actual dimension and measurements and those indicated in the Contract Drawings. Any discrepancies discovered shall be submitted to the Engineer for consideration before proceeding with the work.
- F. Each Contractor shall lay out their work and be responsible for the establishment of heights, grades, etc., for all interior piping, and conduit, etc., included in Contract Documents, in strict accordance with the intent expressed thereby; and all the physical conditions to be met at the building and finished grade, and shall be responsible for accuracy thereof. The establishment of the location of all work shall be performed in consideration of the finished work. In case of conflict, equipment shall be relocated without cost to the Owner, as directed by the Engineer, regardless of which equipment was installed first.
- G. Each Contractor shall cooperate with other Contractors for the proper securing and anchoring of all work included within these specifications. Extraordinary care shall be used in the erection and installation of all equipment and materials to avoid any damage of the work of other Contractors, as each Contractor will be held financially responsible for all such injury caused by the lack of precaution and due to negligence on the part of their workers.
- H. All piping, conduit and other mechanical and electrical materials and equipment mounted below ceilings are to be kept as close to ceiling as possible unless otherwise noted.

## 1.10 RESPONSIBILITY FOR DAMAGE AND CARE OF STATE PROPERTY

- A. The Contractor in the performance of this Contract will be held financially responsible for any damage to the grounds, buildings, or equipment caused by them, their subcontractors or employees, or other persons engaged in the performance of the Contract.
- B. Every reasonable effort shall be made by workmen to proceed with the work as described in these specifications in a manner accepted in trade circles as the highest level of workmanship. The successful bidder for this work shall be responsible for all damage to other work caused by his workmen or through the neglect of his workmen on the site.
- C. Workmanlike care shall be expected at all times in performing the work. It shall be the responsibility of the successful bidder to repair or replace all damaged property, the damage for which they or anyone working under his direction is responsible.

## 1.11 MATERIALS AND EQUIPMENT

- A. All materials and equipment shall be new and shall conform to the grade, quality and standards specified herein.
- B. All equipment offered under these specifications shall be limited to products regularly produced and recommended for service ratings in accordance with engineering data or other comprehensive literature made available to the public and in effect at the time of opening of bids.
- C. Items such as valves, motors, starting equipment, vibration isolating devices, and all other equipment and material, where applicable and practicable, shall each be of one manufacturer.
- D. Equipment shall be installed in strict accordance with manufacturer's instructions for type and capacity of each piece of equipment used. The Contractors shall obtain these instructions which will be considered part of these specifications. Type, capacity and application of equipment shall be suitable and shall operate satisfactorily for the purposes intended.

## 1.12 FASTENINGS AND CLAMPS

- A. Bolts with expansion shields shall not be used as anchor bolts.
- B. All fastenings, clamps and anchors shall be of type made for purpose intended, as follows:
  - 1. Toggle or flat plates in fill with machine screw/bolt fastenings for pre-cast concrete or lath and plaster.
  - 2. Metal expansion shields and machine screws for solid masonry.
  - 3. Lag screws or bolts for wood or material of similar fibrous nature.
  - 4. Screws with wooden or plastic plugs or lead caulking anchors are not acceptable.



1.13 CLEANING

- A. Each Contractor and/or Sub-Contractor who is responsible for execution of individual sections of work shall be responsible for the following:
  - 1. Removal of all lumber, refuse, metal, piping and debris resulting from their work to an on-site location as determined by the Prime Contractor.
  - 2. Cleaning drippings resulting from their work, etc., from finished work of other trades.
  - 3. Cleaning, polishing, waxing of their work as required.
- B. After testing and acceptance by the Engineer, each Contractor shall thoroughly clean all material and equipment involved in their Contract to the satisfaction of the Engineer.

1.14 PROTECTION

- A. Exercise every precaution to exclude dust, dirt and all other foreign materials from rooms during construction.
- B. All piping, materials and accessories having finish polished chrome plated surfaces and machine, finished or unpainted surfaces of equipment furnished under these specifications shall be given a thick coat of a neutral protection grease and carefully covered with thick cloth or heavy building paper held securely in place to protect the finish against damage during the entire period of construction.
- C. All openings in pipes, fittings, conduit, and all other materials shall be effectively sealed to exclude dirt, sand and other foreign materials.
- D. Exercise every precaution to exclude dust, dirt, and all other foreign materials from switchgear rooms, relays, meters and transformer and mechanical equipment rooms during construction. All relays, meters and mechanical equipment contained with electrical components shall be protected with heavy paper held in place with approved mastic tape to exclude fine dust and particles.

1.15 EQUIPMENT DEVIATIONS

- A. Refer to SUBSTITUTIONS Article of Section 00 10 00
- B. Where Prime or Sub-Contractors propose to use an item of equipment other than that specified as the standard of design and construction or detailed on drawings, the provisions of this referenced article shall apply.
- C. Where such approved deviation requires any changes of the structure, partitions, foundations, piping, wiring, or any other part of the Mechanical, Electrical or General Construction Design Documents, all re-design and any new drawings and detailing required therefore, shall with the approval of the Engineer, be prepared and executed by the Contractor at their own expense.

- D. All alternate and/or substitute prices shall include the cost of all items affecting the work of all other trades.

#### 1.16 GUARANTEE

- A. All material, equipment and workmanship provided by each Contractor shall be in first class operating condition in every respect at time of acceptance by Owner. Acceptance by the Owner shall be by letter to this effect written to each Contractor.
- B. Each Contractor shall unconditionally guarantee in writing all materials, equipment and workmanship for a period of two (2) years from date of acceptance by Owner. During the guarantee period each Contractor shall repair or replace, at their own expense, any materials, equipment or workmanship in which defects may develop and they shall also provide free service for all equipment and systems involved in their contract during this guarantee period.
- C. Guarantee shall also include restoration to its original condition of all adjacent work that must be disturbed in fulfilling this guarantee.
- D. All such repairs and/or replacements shall be made without delay and at the convenience of the Owner.
- E. Guarantees furnished by Sub-Contractors and/or equipment manufacturers shall be countersigned by the related Contractor for joint and/or individual responsibility for subject item.
- F. Manufacturer's equipment guarantees or warranties extending beyond the guarantee period described above shall be transferred to the Owner along with the contractor's guarantees.

#### 1.17 AS-BUILT DRAWINGS

- A. During the course of the work, maintain a record set of drawings on which shall be marked the actual physical location of all piping, valves, equipment, conduit, feeders, outlets, access panels, controls, actuators, etc., including all invert elevations.
- B. Include all Addendum items, response to RFI's (field directives), change order items and underground obstructions.
- C. At project completion, obtain a clean set of prints and AutoCAD 2010/2014 CD'S from the Engineer. Make a set of reproducibles. Neatly transfer all the recorded as-built information on to the reproducibles and AutoCAD 2010/2014 CD.
- D. Provide five (5) prints of these reproducibles, one (1) set for the State Archives, and one (1) set along with the reproducibles themselves and AutoCAD 2010/2014 CD's to Owner. In addition, attach one (1) complete set of prints to each of the Operating and Maintenance Instructions.
- E. In cases where the Prime Contractor or Subcontractors are required to design and/or submit original shop drawing documents, prepared by the respective Contractors for submission to State Agencies (i.e.: sprinkler, fire alarm, etc.), each respective Contractor or Subcontractor shall revise their drawings accordingly and include all As-Built information, thereon. Submit

As-Builts in the same format, (i.e.: One (1) reproducible and three (3) prints) as with the project As-Builts.

END OF SECTION

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SECTION 01 10 00

SUMMARY

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:

1. Project information.
2. Access to site.
3. Coordination with occupants.
4. Work restrictions.
5. Specification and drawing conventions.

B. Related Requirements:

1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification) Elevator Replacement & Upgrades - DE Technical Community College

1. Project Location: Orlando J. George Jr. Campus, Wilmington, DE

B. Owner: Delaware Technical Community College

1. Owner's Representative: John Fogelgren Jr
  - a. Owner's Address: DTCC - 300 N. Orange St., Wilmington, Delaware 19801

C. Architect: Tetra Tech.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The Work of Project is defined by the Contract Documents and consists of the following:
  - a. Project consists of the replacement of the existing low slope roofing system as further described in the Construction Documents.

2. Type of Contract: Project will be constructed under a single prime contract.

#### 1.5 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  1. Limits: Confine construction operations to Limits of Disturbance.
  2. Driveways, Walkways 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.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

#### 1.6 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. 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. Maintain existing exits unless otherwise indicated.
  1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
  1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
  2. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
  3. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.

4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

#### 1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 3:00 p.m., Monday through Friday, unless otherwise indicated.
  1. Weekend Hours: Must be arranged in advance.
  2. Early Morning Hours: Provide 72 hours' notice.
  3. Hours for Utility Shutdowns:
  4. Hours for Core Drilling: Provide 72 hours' notice.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
  1. Notify Architect or Owner not less than three (3) days in advance of proposed utility interruptions.
  2. Obtain Architect and Owner written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
  1. Notify Architect and Owner not less than two (2) days in advance of proposed disruptive operations.
  2. Obtain Architect and Owner written permission before proceeding with disruptive operations.
- E. Controlled Substances: Use of tobacco products and other controlled substances Project site is not permitted.
- F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- G. Employee Screening: Comply with Owner's requirements drug and background screening of Contractor personnel working on Project site.
  1. Maintain list of approved screened personnel with Owner's representative.

#### 1.8 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
  3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

END OF SECTION



SECTION 01 25 00

SUBSTITUTION 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. Section includes administrative and procedural requirements 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.

1.4 ACTION 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. 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 value of proposed substitution to produce indicated results.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
    - a. Form 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.
- B. Quality Assurance
1. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.5 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.

1. 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: Not allowed unless otherwise indicated.

C. Substitutions for Convenience: Architect will consider requests for substitution if received within 30 days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Architect.

1. 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 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.
- b. Requested substitution does not require extensive revisions to the Contract Documents.
- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.

- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. 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.

PART 3 - EXECUTION (Not Used)

END OF SECTION

**NOT FOR BIDDING PURPOSES**

SECTION 01 31 00

PROJECT MANAGEMENT & 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 the Project including, but not limited to, the following:
  - 1. General project coordination procedures.
  - 2. Coordination Drawings.
  - 3. Administrative and supervisory personnel.
  - 4. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in various Sections of the Specifications to insure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. 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.
  - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. If necessary, 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 the Owner and separate contractors if coordination of their Work is required.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other 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 the 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. Preinstallation conferences.
  7. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

#### 1.4 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Indicate relationship of components shown on separate Shop Drawings.
  2. Indicate required installation sequences.
- B. Staff Names: Within 15 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at the Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to the Project.
1. Post copies of list in the Project meeting room, in temporary field office, and by each temporary telephone.

#### 1.5 PROJECT MEETINGS

- A. General: The Architectural/Engineering Consultant shall Schedule and conduct meetings and conferences at the 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 the Owner and the Contractor 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 the Owner and the Architect, within 3 days of the meeting.
- B. Preconstruction Conference: The Architectural/Engineering Consultant shall Schedule a preconstruction conference before starting construction, at a time convenient to the Owner and the Architect, but no later than 15 days after execution of the Agreement. Hold the conference

at the Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of the Owner, the Contractor, and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
  - a. Tentative construction schedule.
  - b. Phasing.
  - c. Critical work sequencing.
  - d. Designation of responsible personnel.
  - e. Procedures for processing field decisions and Change Orders.
  - f. Procedures for processing Applications for Payment.
  - g. Distribution of the Contract Documents.
  - h. Submittal procedures.
  - i. Preparation of Record Documents.
  - j. Use of the premises.
  - k. Responsibility for temporary facilities and controls.
  - l. Parking availability.
  - m. Office, work, and storage areas.
  - n. Equipment deliveries and priorities.
  - o. First aid.
  - p. Security.
  - q. Progress cleaning.
  - r. Working hours.

C. Progress Meetings: The Architectural/Engineering Consultant shall conduct progress meetings at bimonthly intervals. Coordinate dates of meetings with preparation of payment requests.

1. 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 the Project.
  - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to the Contractor's Construction Schedule. 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. Review present and future needs of each entity 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.
  - 14) Documentation of information for payment requests.
2. Reporting: The Architectural/Engineering Consultant shall distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
- a. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

NOT FOR BIDDING PURPOSES



SECTION 01 31 13

COORDINATION OF TRADES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Applicable provisions of the entire Project Manual, including Addenda, shall govern this section as fully as if repeated herein.
- B. This section is for guidance only and does not relieve the Prime Contractor of the total responsibility for the proper completion of this work.

1.2 CUTTING AND PATCHING

- A. Refer to Section 01 73 29 Cutting & Patching.

1.3 ABANDONMENT, REMOVAL AND RELOCATION

- A. Prime Contractor and each Sub-Contractor shall perform all removal and relocation work related to their trade as required for installation of work installed for entire job and shall cooperate fully among themselves in these respects.
- B. Removals shown on drawings are a general indication only and may not necessarily indicate the full extent of removals which may be required to complete this work.
- C. The Prime Contractor shall seal all existing and resultant penetrations and voids and perform surface refinishing as required.
- D. Each Contractor shall provide, erect and maintain barricades, guards, bracing, shoring, etc. required for the protection of their workers, the occupants of the building and the General Public.
- E. During the course of this work, each Contractor shall, by means of canvasses, temporary partitions or otherwise as may seem expedient to them, protect the property and adjacent areas from damage, dirt and dust.
- F. All demolition work is subject to the direction and approval of the Owner and Engineer and shall be performed in such manner as not to interfere with the normal operation of the building involved.
- G. Where work under this contract interferes with the existing construction, piping, conduit, fixtures or equipment, remove the existing construction, piping, conduit or equipment and reroute to clear the obstruction providing additional piping and conduit, if necessary, of the same design and quality if the material, piping or conduit are to be continued in use.
- H. Disconnect and remove all accessible piping, conduit, ductwork, materials, fixtures and equipment not required in the new systems. Plug all outlets at the main or riser connection.

- I. Removed materials not desired by the Owner or not to be reset and not specified nor indicated to be reused, shall become the property of the Contractors and shall be promptly removed from the site.

END OF SECTION

**NOT FOR BIDDING PURPOSES**

SECTION 01 31 20  
PAYROLL REPORTS

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 schedules and reports required for proper performance of the Work, including:
  - 1. State of Delaware Payroll Reports.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section "Applications for Payment" specifies requirements for submittal of the Schedule of Values.
  - 2. Division 01 Section "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of schedules and reports with performance of other construction activities.

1.4 PAYROLL REPORTS

- A. State of Delaware Payroll Reports: As required by the State of Delaware, Section 6960, Title 29, of the Delaware Code, payroll wages shall be reported weekly to the Delaware Department of Labor, Division of Industrial Affairs, 4425 North Market Street, Wilmington, DE 19802, phone 302-761-8200. Forms shall be available at the above address. A sample copy of the form is attached under contract forms, State of Delaware Payroll Report.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

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SECTION 01 32 00

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 1 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. Submittals Schedule.
4. Daily construction reports.
5. Material location reports.
6. Field condition reports.
7. Construction photographs.

- B. Related Sections include the following:

1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
4. Division 01 Section "Closeout Procedures" for submitting photographic negatives as Project Record Documents at Project closeout.

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 is an activity that must be completed before a given activity can be started.

- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

- C. Critical Path: The longest continuous chain of 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 following 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.

#### 1.4 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article and in-house scheduling personnel to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Submittals Schedule: Submit three 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.
- C. Contractor's Construction Schedule: Submit three printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period.
- D. CPM Reports: Concurrent with CPM schedule, submit three printed copies of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float.
  - 1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
  - 2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
  - 3. Total Float Report: List of all activities sorted in ascending order of total float.

- E. Daily Construction Reports: Submit two copies at weekly intervals.
- F. Material Location Reports: Submit two copies at weekly intervals.
- G. Field Condition Reports: Submit two copies at weekly intervals.

#### 1.5 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting.

#### 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, resubmittal, 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. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

#### 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

- A. CPM Schedule: Prepare Contractor's Construction Schedule using a CPM network analysis diagram.
  - 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 15 days after date established for the Notice to Proceed..
  - 2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
  - 3. Use "one workday" as the unit of time.

- B. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Purchase of materials.
    - c. Delivery.
    - d. Fabrication.
    - e. Installation.
  2. Processing: Process data to produce output data or a computer-drawn time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
  3. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
    - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

## 2.3 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. High and low temperatures and general weather conditions.
  5. Accidents.
  6. Meetings and significant decisions.
  7. Unusual events (refer to special reports).
  8. Stoppages, delays, shortages, and losses.
  9. Meter readings and similar recordings.
  10. Emergency procedures.
  11. Orders and requests of authorities having jurisdiction.
  12. Change Orders received and implemented.
  13. Construction Change Directives received.
  14. Services connected and disconnected.
  15. Equipment or system tests and startups.
  16. Partial Completions and occupancies.
  17. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare 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 a detailed report. Submit with a request for information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION (not used)

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SECTION 01 33 00  
SUBMITTAL 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. Section includes requirements for the administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
  - 1. Process designated submittals for the Project electronically through designated email system.

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. 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.
- D. Email System: A method to transmit certain electronic submittals between the Contractor, Architect, and Owner, via email.
  - 1. For consistency, the standard file format will be PDF. Convert paper originals and other file formats to PDF prior to submission.
  - 2. In the event of system malfunction, submittals shall be processed in accordance with the Architect's instructions, until the system malfunction has been corrected.
  - 3. For this Project, process the following submittal types through the designated email system:
    - a. Product Data.

- b. Shop Drawings.
  - c. Product Schedules.
  - d. Qualification Data.
  - e. Certificates (Welding, Installer, Manufacturer, Product, and Material, as applicable).
  - f. Test Reports (Material, Product, Preconstruction, Compatibility, and Field, as applicable).
  - g. Research Reports.
  - h. Warranty (sample).
  - i. Design Data, including calculations.
  - j. Coordination Drawings.
  - k. Delegated-Design Services Certifications.
4. For Samples, provide electronic submittal of Sample cover sheet, identifying location and actual delivery date of Samples. Deliver Samples to location (Architect's office, Project site, etc.) as directed by the Architect.

#### 1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. 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. Where indicated, submit all submittal items required for each Specification Section concurrently.
  3. 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.
- B. Processing Time: Allow sufficient time for submittal review, including time for resubmittals. 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 resubmittals.
- C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Include a cover sheet on each submittal item for identification. Do not combine different submittals under same cover sheet; only one submittal is to be provided per email.
    - a. Cover Sheet: Use PDF version of sample form included in Project Manual. Complete each item on form, sign and date. Architect will furnish PDF version of sample form.
  2. Name submittal file as directed by Architect.

3. Transmit each submittal via email using subject line as directed by Architect.
  4. Send submittal to designated Project-specific email address:
    - a. Use the following email address: TAE.DelTech@tetrattech.com
  5. Contractor must have a color printer and copier in order to use the electronic submittal process.
- D. Resubmittals: Make resubmittals in same form and, for non-electronic submittals, in the same number of copies as initial submittal.
1. Note date and content of revision in label or title block and clearly indicate extent of revision.
  2. Resubmit submittals until they are marked with approval notation from Architect.
  3. Refer to Supplementary Conditions for provisions allowing Owner to obtain reimbursement from the Contractor for amounts paid to the Architect for evaluation of certain resubmittals.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES, GENERAL

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

### 2.2 ELECTRONIC SUBMITTAL PROCEDURES

- A. Use the designated email system for submittals in this Article.
  1. Submit electronic submittals via email as PDF electronic files.
    - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
  2. Contractor must have a color printer and copier in order to use the electronic submittal process.

- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. Mark submittal to show which products and options are applicable.
  2. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Statement of compliance with specified referenced standards.
    - c. Testing by recognized testing agency.
  3. For equipment, include the following in addition to the above, as applicable:
    - a. Printed performance curves.
    - b. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
- 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, unless submittal based on Architect's digital data drawing files is otherwise permitted.
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 dimensions established by field measurement.
    - e. Relationship and attachment to adjoining construction clearly indicated.
    - f. Seal and signature of professional engineer if specified.
- D. 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.
- E. 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.
- F. Certificates:
1. 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.

2. 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.
  3. 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.
  4. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
  5. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- G. Test Reports:
1. 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.
  2. 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.
  3. 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.
  4. 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.
  5. 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.
- H. 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.
- I. Warranty: Submit sample warranties as required in individual Specification Sections.
- J. 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.

- K. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- L. Delegated-Design Services Certification: Submit 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.
  - 2. In addition, for a project in New Jersey, provide three paper copies of certificate, signed and sealed (with raised seal) by the responsible design professional.

### 2.3 NON-ELECTRONIC SUBMITTAL PROCEDURES

- A. 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.
  - 2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of applicable Specification Section.
  - 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
  - 4. 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 two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return one submittal with options selected.
  - 5. 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 two sets of Samples. Architect will return one set.

- 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

B. Shop Drawing Submissions:

1. Submit eight (8) copies for review.

C. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Submit subcontract list in the following format:

a. Number of Copies: Four paper copies of subcontractor list, unless otherwise indicated. Architect will return one copy.

D. Key Personnel Names: No later than 15 days after date of Notice of Award, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site.

1. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including emergency, office, and cellular telephone numbers and email addresses.

a. Number of Copies: Four paper copies of key personnel list, unless otherwise indicated.

E. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."

F. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."

## 2.4 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.

## PART 3 - EXECUTION

## 3.1 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. Identify any deviations from Contract Document requirements. Mark cover sheet with approval before submitting to Architect.
1. Sign and date statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

## 3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear contractor's approval and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will mark submittal appropriately to indicate action, as follows:
1. Final Unrestricted Release: Where the submittal is marked "Approved," the Work covered by the submittal may proceed provided it complies with the Contract Documents. Final acceptance will depend on that compliance.
  2. Final-but-Restricted Release: Where the submittal is marked "Approved as Noted," the Work covered by the submittal may proceed provided it complies both with Architect's notations and corrections on the submittal and the Contract Documents. Final acceptance will depend on that compliance.
  3. Resubmit: Where the submittal is marked "Approved, Revise and Return Corrected Copies," the Work covered by the submittal may proceed provided it complies both with Architect's notations and corrections on the submittal and the Contract Documents. Revise submittal according to Architect's notations and corrections and return corrected copies. Final acceptance will depend on that compliance.
  4. Rejected: Where the submittal is marked "Rejected," do not proceed with the Work covered by the submittal. Prepare a new submittal for a product that complies with the Contract Documents.
  5. Incomplete - Resubmit: Where the submittal is marked "Incomplete, Submit Additional Information," do not proceed with the Work covered by the submittal. Prepare additional information requested, or required by the Contract Documents, that indicates compliance with requirements, and resubmit.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements.

- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Limit information submitted to specific products indicated. Do not submit extraneous matter. Submittals containing excessive extraneous matter will be returned for resubmittal without review.
- F. Submittals not required by the Contract Documents may be returned by the Architect without action.

Attachment:        Cover Sheet

END OF SECTION

**NOT FOR BIDDING PURPOSES**

CONTRACTOR: \_\_\_\_\_

SUBMITTAL DATE \_\_\_/\_\_\_/\_\_\_

Check following as applicable:  
 First Submission  
 Re-submission

ARCHITECT: Tetra Tech Inc.

**PROJECT IDENTIFICATION**

Architect's Project No.: \_\_\_\_\_

Proj. Name: \_\_\_\_\_

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

**PRODUCT IDENTIFICATION**

Specification Section No. \_\_\_\_\_

Submittal No. \_\_\_\_\_

Name of Product: \_\_\_\_\_

Name of Manufacturer: \_\_\_\_\_

**SUBCONTRACTOR**

**SUPPLIER**

**RELATIONSHIP TO STRUCTURE**

Building Name \_\_\_\_\_

(Room #) \_\_\_\_\_ (Room Name) \_\_\_\_\_

Contract Drawing No.: \_\_\_\_\_

**DEVIATION FROM CONTRACT DOCUMENTS:** \_\_\_\_\_

**CONTRACTOR COMMENTS:** \_\_\_\_\_

**ARCHITECT'S COMMENTS:** \_\_\_\_\_

**CONTRACTOR'S STAMP**

**CONTRACTOR'S CERTIFICATION**

I CERTIFY THAT THIS SUBMITTAL HAS BEEN REVIEWED AND APPROVED BY THE CONTRACTOR IN ACCORDANCE WITH THE GENERAL CONDITIONS.

BY \_\_\_\_\_

RESERVED FOR USE BY TETRA TECH

**ACTION SUBMITTAL:**

- Approved
- Approved As Noted
- Approved, Revise and Return Corrected Copies
- Rejected
- Incomplete Submit Additional Information

**INFORMATIONAL SUBMITTAL:**

- No Action Taken
- Returned for Resubmittal

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

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

Reviewed only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review 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. Review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures.

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## **Use and Indemnification Agreement - INSTRUCTIONS**

### USE AND INDEMNIFICATION AGREEMENT

Please be aware that Tetra Tech charges contractor(s) for electronic files (this applies to files in AutoCAD (or similar) format).

*PDF's, which are simply an electronic scan of the drawings, do not require the use of the indemnification form; however we charge \$50 per PDF to cover our expenses. Tetra Tech must receive the contractor's check prior to sending PDF's.*

For AutoCAD type files, the cost is \$100 per electronic drawing, regardless of the number of drawings they are requesting. The Use and Indemnification Agreement is to be signed by the Prime Contractor. Should a subcontractor, such as a steel fabricator, ductwork detailer, desire electronic files, they would need to pursue this request through their Prime Contractor, who has the contract with the Client.

**Due to the inherent value to the company of our typical details and our other standards, we limit the drawings types that we will release via this indemnification form to plan type drawings. Typical detail sheets are not to be released in the form of an electronic AutoCAD drawing file.**

**In addition, our internal individual Base Plans will not be released; we limit what the contractor can purchase to the actual individual contract drawings.**

After the Prime Contractor has determined the number of drawings that they will need, fill out the following two pages. The second page of the form, marked Use and Indemnification Agreement – Business Office, needs to be sent to the Business Office with the Contractor check made out to Tetra Tech. We will not release electronic files until we receive this form and the check.

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240 Continental Drive, Suite 200  
Newark, Delaware 19713  
Tel. (302) 738-7551  
Fax (302) 454-5980

**Use and Indemnification Agreement**

Re: DTCC ETB Roof Replacement

Tt Project No. 200-35157-18001

Whereas, \_\_\_\_\_ (hereinafter the "Contractor"), acknowledges that it has requested certain electronic files and/or media of the Drawings and/or Specifications for the above-referenced Project which are the property of Tetra Tech Engineers, Architects & Landscape Architects, P.C. d/b/a Tetra Tech Architects & Engineers (hereinafter "Tetra Tech").

Whereas, Contractor further acknowledges all requests for electronic files require a pre-payment of \$100/file (Each individual drawing in the set of Contract Documents represents 1 file), regardless of the number of files requested, prior to receiving said files from Tetra Tech.

Now, therefore, Contractor hereby warrants and covenants that it will abide by the following provisions:

A. Indemnification

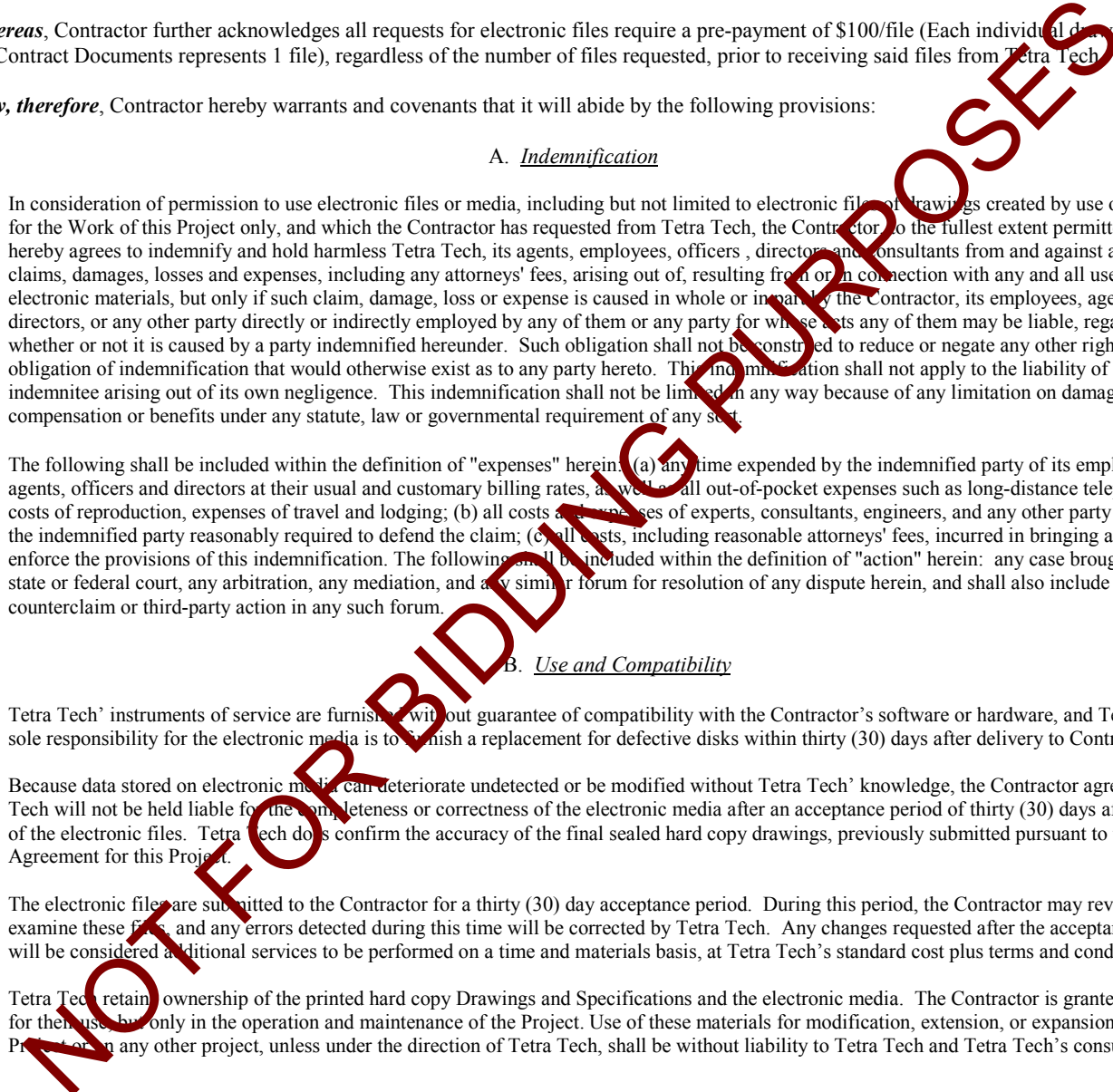
- In consideration of permission to use electronic files or media, including but not limited to electronic files of drawings created by use of computer, for the Work of this Project only, and which the Contractor has requested from Tetra Tech, the Contractor to the fullest extent permitted by law, hereby agrees to indemnify and hold harmless Tetra Tech, its agents, employees, officers, directors and consultants from and against any and all claims, damages, losses and expenses, including any attorneys' fees, arising out of, resulting from or in connection with any and all use of said electronic materials, but only if such claim, damage, loss or expense is caused in whole or in part by the Contractor, its employees, agents, officers, directors, or any other party directly or indirectly employed by any of them or any party for whose acts any of them may be liable, regardless of whether or not it is caused by a party indemnified hereunder. Such obligation shall not be construed to reduce or negate any other right or obligation of indemnification that would otherwise exist as to any party hereto. This indemnification shall not apply to the liability of the indemnitee arising out of its own negligence. This indemnification shall not be limited in any way because of any limitation on damages, compensation or benefits under any statute, law or governmental requirement of any state.
- The following shall be included within the definition of "expenses" herein: (a) any time expended by the indemnified party of its employees, agents, officers and directors at their usual and customary billing rates, as well as all out-of-pocket expenses such as long-distance telephone calls, costs of reproduction, expenses of travel and lodging; (b) all costs and expenses of experts, consultants, engineers, and any other party retained by the indemnified party reasonably required to defend the claim; (c) all costs, including reasonable attorneys' fees, incurred in bringing any action to enforce the provisions of this indemnification. The following shall be included within the definition of "action" herein: any case brought in any state or federal court, any arbitration, any mediation, and any similar forum for resolution of any dispute herein, and shall also include any counterclaim or third-party action in any such forum.

B. Use and Compatibility

- Tetra Tech' instruments of service are furnished without guarantee of compatibility with the Contractor's software or hardware, and Tetra Tech' sole responsibility for the electronic media is to furnish a replacement for defective disks within thirty (30) days after delivery to Contractor.
- Because data stored on electronic media can deteriorate undetected or be modified without Tetra Tech' knowledge, the Contractor agrees that Tetra Tech will not be held liable for the completeness or correctness of the electronic media after an acceptance period of thirty (30) days after delivery of the electronic files. Tetra Tech does confirm the accuracy of the final sealed hard copy drawings, previously submitted pursuant to the Prime Agreement for this Project.
- The electronic files are submitted to the Contractor for a thirty (30) day acceptance period. During this period, the Contractor may review and examine these files, and any errors detected during this time will be corrected by Tetra Tech. Any changes requested after the acceptance period will be considered additional services to be performed on a time and materials basis, at Tetra Tech's standard cost plus terms and conditions.
- Tetra Tech retains ownership of the printed hard copy Drawings and Specifications and the electronic media. The Contractor is granted a license for their use, but only in the operation and maintenance of the Project. Use of these materials for modification, extension, or expansion of this Project on any other project, unless under the direction of Tetra Tech, shall be without liability to Tetra Tech and Tetra Tech's consultants.

**IN WITNESS WHEREOF:**

Contractor: \_\_\_\_\_  
Signed name: \_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_





240 Continental Drive, Suite 200  
Newark, Delaware 19713  
Tel. (302) 738-7551  
Fax (302) 454-5980

**Use and Indemnification Agreement** – Business Office

.....  
**Electronic Drawing Files**

Prime Contractor Name

Prime Contractor Address

Contact to Receive Invoices

Project Name DTCC – ETB Roof Replacement

Project Number 200-35157-18001

Number of Drawing Files (Each individual drawing in the set of Contract Documents represents 1 file)

List each Drawing # Requested

Contractor Signature \_\_\_\_\_

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SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

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, may apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 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, Owner's construction forces, Architect, Engineer, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Owner will not provide sewer-service for the project. Contractor shall provide all required temporary sanitary facilities.
- C. Water Service: Owner will provide on-site access to water service used by all entities for construction operations.
- D. Electric Power Service: Owner will provide on-site access to electric-power-service used by all entities for construction operations. Contractor shall furnish all necessary equipment to facilitate connection to power including coordination of permits with any inspection agency and or installation.
- E. Upon completion of the project and prior to demobilization the Contractor shall at his or her sole expense, remove any temporary utility service equipment and restore the service location to its pre-construction condition.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Dust-Control Plan: 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 work.
2. Waste handling procedures.
3. Other dust-control measures.

#### 1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in ADA-ABA Accessibility Guidelines.

#### 1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

### PART 2 - PRODUCTS

#### 2.1 TEMPORARY FACILITIES

- A. Field Offices, General - Shall be set-up in the building.
- B. Keep office clean and orderly. Furnish and equip offices as follows:
  1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
  2. Conference room of sufficient size to accommodate meetings of 6 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-square tack and marker boards.
  3. Drinking water and private toilet.
  4. Coffee machine and supplies.
  5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
  6. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.

- C. Storage or Fabrication Sheds: Provide sheds sized, furnished, and equipped or fenced around to accommodate materials and equipment for construction operations as needed for secure area for equipment.

- 1. Store combustible materials apart from building.

## 2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostat control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
- C. Obtain permission from Owner to use existing Heating and Cooling equipment. Change filters monthly. Provide a set of clean filters when done and two (2) sets of spare filters.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 01 10 00 "Summary."
  - 2. Area Available: Designated area as shown on Sheet CC-01.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed and remove prior to demobilization.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

- C. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- D. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
1. Prior to commencing work if necessary, isolate the HVAC system in area where work is to be performed according to coordination drawings.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  2. Maintain dust partitions during the Work if needed. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- E. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
1. Connect temporary service to Owner's existing power source, as directed by Owner.
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
1. Install and operate temporary lighting that fulfills security and protection requirements without operating fire system.
- G. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install a minimum of one telephone line for each field office.
1. Provide additional telephone lines for the following:
    - a. Provide a dedicated telephone line for each facsimile machine in each field office.
  2. At each telephone, post a list of important telephone numbers.
    - a. Police and fire departments.
    - b. Ambulance service.
    - c. Contractor's home office.
    - d. Contractor's emergency after-hours telephone number.
    - e. Architect's office.
    - f. Engineers' offices.
    - g. Owner's office.
    - h. Principal subcontractors' field and home offices.

3. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

H. Electronic Communication Service: Provide a desktop computer in the primary field office adequate for use by Architect and Owner to access Project electronic documents and maintain electronic communications. Equip computer with not less than the following:

1. Processor: Intel Pentium D or Intel CoreDuo, 3.0 GHz processing speed.
2. Memory: 4 gigabyte.
3. Disk Storage: 300 gigabyte hard-disk drive and combination DVD-RW/CD-RW drive.
4. Display: 22-inch LCD monitor with 256-Mb dedicated video RAM.
5. Full-size keyboard and mouse.
6. Network Connectivity: 10/100BaseT Ethernet.
7. Operating System: Microsoft Windows XP Professional or Microsoft Windows Vista Business.
8. Productivity Software:
  - a. Microsoft Office Professional, XP or higher, including Word, Excel, and Outlook.
  - b. Adobe Reader 7.0 or higher.
  - c. WinZip 7.0 or higher.
9. Printer: "All-in-one" unit equipped with printer server, combining color printing, photocopying, scanning, and faxing, or separate units for each of these three functions.
10. Internet Service: Broadband modem, router and ISP, equipped with hardware firewall, providing minimum 384 Kbps upload and 1 Mbps download speeds at each computer.
11. Internet Security: Integrated software, providing software firewall, virus, spyware, phishing, and spam protection in a combined application.
12. Backup: External hard drive, minimum 40 gigabyte, with automated backup software providing daily backups.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. Parking: Use designated areas of Owner's existing parking areas for construction personnel as directed.
- B. Project Signs: Provide Project signs as need and approved by the DEARNG. Unapproved signs are not permitted.
  1. Identification Signs: Provide Project identification signs as indicated on Drawings.
  2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project or directions to construction field office.
    - a. Provide temporary, directional signs for construction personnel and visitors.
  3. Maintain and touchup signs so they are legible at all times.
- C. Waste Disposal Facilities: Comply with requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."

- D. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 01 73 00 "Execution."
- E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- F. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- G. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
  - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.
- H. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: 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.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and soil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Section 01 10 00 "Summary."
- C. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit by following applicable requirements as stipulated on the Erosion and Sediment Plan Sheets CE-01 to CE-04 approved by DNREC, including CCR if required by DNREC, or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 31 10 00 "Site Clearing."
- D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to Erosion and Sediment Plan Sheets CE-01 to CE-04 approved by DNREC and requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
  - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.

2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
  3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
  4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- E. Stormwater Control: Comply with requirements of authorities having jurisdiction including DNREC and CCR, if required by DNREC. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- G. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by existing entrance gates at south entrance.
1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
  2. Maintain security of construction area by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- J. Temporary Egress: maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- K. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- L. Temporary Partitions: If necessary provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and tenants from fumes and noise.
1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
  2. Construct dustproof partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.



- a. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches between doors. Maintain water-dampened foot mats in vestibule.
  3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  4. Insulate partitions to control noise transmission to occupied areas.
  5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
  6. Protect air-handling equipment.
  7. Provide walk-off mats at each entrance through temporary partition.
- M. Temporary Fire Protection: If necessary install and maintain temporary fire protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Prohibit smoking in construction areas.
  2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  3. Develop and supervise an overall fire-prevention and protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
  4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

### 3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Items C, D, and E below apply only to existing facilities to remain.
- C. 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.
- D. Partially Enclosed Construction Phase: After installation of weather barriers but before full 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.

E. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use permanent HVAC system to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
  - a. Hygroscopic materials that may support mold growth including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
  - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
  - c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

### 3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  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.
- C. Temporary Facility Changeover: Change over from using temporary security and protection facilities to permanent facilities must occur before Demobilization and prior to Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been 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 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 property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove

materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.

3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

END OF SECTION

**NOT FOR BIDDING PURPOSES**

SECTION 01 73 29  
CUTTING & 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. Related Sections include the following:
  - 1. Divisions 03 through 09 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

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.

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. 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 result in increased maintenance or decreased operational life or safety. Operating elements include the following:
  - 1. Fire-suppression systems.
  - 2. Mechanical systems piping and ducts.
  - 3. Control systems.
  - 4. Communication systems.
  - 5. Conveying systems.
  - 6. Electrical wiring systems.

- C. 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.
- D. 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.

## 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 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 or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  4. 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.
  5. 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.
  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

**NOT FOR BIDDING PURPOSES**

SECTION 01 77 00  
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. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.
- B. Related Requirements:
  - 1. Section 01 73 00 "Execution" for progress cleaning of Project site.
- C. Delaware Department of Transportation (DelDOT) Standard Specifications.
- D. Delaware Department of Natural Resources and Environmental Control (DNREC) Erosion and Sediment Control Handbook.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

## 1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

## 1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
  3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
    - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
  5. Submit test/adjust/balance records.
  6. Submit sustainable design submittals not previously submitted.
  7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment.
  4. Perform preventive maintenance on equipment used prior to Substantial Completion.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.



6. Advise Owner of changeover in heat and other utilities.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify 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.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

#### 1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
3. Submit pest control final inspection report.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization 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.
2. 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.
3. Submit list of incomplete items in the following format:
  - a. MS Excel electronic file. Architect will return annotated file.
  - b. PDF electronic file. Architect will return annotated file.
  - c. Three paper copies. Architect will return two copies.

#### 1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
  1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
  4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform 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 designated 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. Leave Project clean and ready for occupancy.
- C. Construction Waste Disposal: Comply with waste disposal requirements in Section 01 50 00 "Temporary Facilities and Controls" and Section 01 74 19 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

## 3.3 SUMMARY OF CLOSEOUT DOCUMENTS

- A. Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706)
- B. Contractor's Consent of Surety Company to Final Payment (AIA Document G707) (one copy)
- C. Contractor's Affidavit of Release of Liens (AIA Document G706A) (one copy)
- D. Copy of Letter of Guarantee and Warranty Information (three copies)
- E. Balancing Reports
- F. Subcontractor's Release of Liens had been submitted with each previous Application of Payment (AIA Document G706A) (one copy)
- G. Operation and Maintenance Manuals
- H. Record Shop Drawings and Submittals
- I. As-built Drawings: All construction changes should be clouded and marked.
  - 1. Updated CAD files to reflect changes and as-built conditions; AutoCadd dwg file 2010 to 2014 format.
  - 2. Three (3) hard copies of As-builts.
- J. Affidavit of Discharge of State Tax Liability (Furnish an affidavit from the State Tax Department that all liabilities thereunder have been discharged by the Contractor and all subcontractors. (Delaware Division of Revenue, Mr. William Kirby, 302-577-8259).
- K. Punch List Closeout Letter
- L. Electrical Inspection Certificate
- M. Bond Certification
- N. Boiler Startup and Combustion Reports

END OF SECTION

**SECTION 06 10 26**

**ROOFING ROUGH CARPENTRY**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Rooftop equipment bases and support curbs.
2. Roof wood blocking and nailers.
3. Fasteners.
4. Isolation barrier membrane.

1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- B. Lumber grading agencies and the abbreviations used to reference them, include the following:
1. NeLMA: Northeast Lumber Manufacturers' Association.
  2. NLGA: National Lumber Grades Authority.
  3. SPIB: The Southern Pine Inspection Bureau.
  4. WCLIB: West Coast Lumber Inspection Bureau.
  5. WWPA: Western Wood Products Association.

1.4 SUBMITTALS, GENERAL

- A. General: Submit all action submittals required by this Section concurrently.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of process and product. Indicate component materials and dimensions and include construction and application details. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1. Wood-Preservative-Treated Materials: Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Miscellaneous lumber.
3. Fasteners.
4. Isolation barrier membrane.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

### PART 2 - PRODUCTS

#### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: U.S. Department of Commerce (DOC) PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  3. Provide dressed lumber S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

#### 2.2 WOOD PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC3b for exterior construction not in contact with the ground.
  1. Preservative Chemicals: Waterborne system acceptable to authorities having jurisdiction and containing no arsenic, chromium or ammonia.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:

1. Wood nailers, curbs, equipment support bases, blocking, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

### 2.3 PRESERVATIVE-TREATED PLYWOOD

- A. Preservative Treatment by Pressure Process: AWWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
- C. Application: Treat items indicated on Drawings.

### 2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  1. Blocking.
  2. Nailers.
  3. Rooftop equipment bases and support curbs.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber and any of the following species:
  1. Hem-fir (north); NeLMA.
  2. Mixed southern pine, SPIB.
  3. Spruce-pine-fir, NLGA.
  4. Hem-fir, WCLIB or WWPA.
  5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

### 2.5 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
  1. Provide all fasteners of Type 304 stainless steel.
- B. Wood Screws for Attachment of Roof Blockings: Screws complying with ASME B18.6.1. Series 300 stainless steel, non-magnetic, torx or square drive, #10, length as required to provide minimum embedment of 1 1/2" into substrate.

- C. Screws for Attachment to Metal Deck: Self drilling screws complying with ASME B18.6.1. Series 300 stainless steel, non-magnetic, torx or square drive, #10, 2 ½" length (unless otherwise noted).
- D. Screws for Attachment to Steel Angles or Framing: Self drilling screws complying with ASME B18.6.1. Series 300 stainless steel, non-magnetic, #12, 2 ½" length minimum (unless otherwise noted).
  - 1. With winged reamers: Wings designed to break off at contact with steel.
- E. Lag Bolts: ASME B18.2.1.
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 505 hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency. Anchor expands by tightening or hammering a pin after insertion into pre-drilled hole.
  - 1. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

## 2.6 MISCELLANEOUS MATERIALS

- A. Isolation barrier membrane: Self-adhering, high-temperature sheet, minimum 15 mils thick, consisting of cross-laminated polyethylene-film top surface laminated to layer of butyl adhesive, with release-liner backing; cold applied, in roll width to match or exceed width of area to be protected. Provide primer when recommended by membrane manufacturer.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Grace Construction Products, a unit of W. R. Grace & Co.; "Vycor Pro".
    - b. Equivalents meeting requirements of specified products.
- B. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chlorpyrifos as its active ingredient.

## PAINT EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.



- B. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous isolation barrier membrane between wood and metal decking.
- C. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- D. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.

### 3.2 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
  - 1. Provide 1/2-inch vent space between each length of blocking.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with recommendations of FM Global Loss Prevention Data Sheet 1-49 and the following:
  - 1. Anchor bottom blocking to steel angles with minimum 3/8-inch stainless steel bolts with washers, at maximum 24 inches on center.
  - 2. At locations where bottom blocking is to be attached directly to metal decking: Provide isolation barrier membrane between deck and blocking, install wrinkle free. Apply primer if required by membrane manufacturer. Use primer rather than nails for installing membrane at low temperatures, overlap edges not less than 3 1/2 inches, roll laps with roller, cover membrane within 14 days. Attach bottom blocking with stainless steel self-drill screws, penetrating metal decking at least 1 inch in two rows, spaced not more than 24 inches on center and within 12 inches from end of blocking lengths.
  - 3. Attach subsequent blocking to bottom blocking with stainless steel screws, penetrating at least 1-1/4 inches in two rows, spaced not more than 24 inches on center and within 12 inches from end of blocking lengths.
  - 4. At outside building corners, locate fasteners at 12 inches on center and within 12 inches from corner, unless closer spacing is required to meet minimum 100 lb per fastener withdrawal force in any direction, or to comply with FM 1-49 recommendations.

END OF SECTION

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**SECTION 07 01 50.19**

**PREPARATION FOR REROOFING**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Full tear-off of roof system at areas indicated on Drawings.
2. Removal of flashings and counterflashings.

1.2 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting removal Work, conduct conference at Project site.

1.3 INFORMATIONAL SUBMITTALS

- A. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.

1. Submit before Work begins.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Approved by warrantor of existing roofing system to work on existing roofing.

1.5 FIELD CONDITIONS

- A. Existing Roofing System: EPDM roofing.

- B. Owner will occupy portions of building immediately below reroofing area.

1. Conduct reroofing so Owner's operations are not disrupted.
2. Provide Owner with not less than 72 hours' written notice of activities that may affect Owner's operations.
3. Coordinate work activities daily with Owner so Owner has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.

- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed to 200 PSF for rooftop equipment wheel loads and 200 PSF for uniformly distributed loads.
- F. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
  - 1. Remove only as much roofing in one day as can be made watertight in the same day.

## PART 2 - PRODUCTS

### 2.1 AUXILIARY REROOFING MATERIALS

- A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new roofing system.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- B. Shut off rooftop utilities and service piping before beginning the Work.
- C. Test existing roof drains to verify that they are not blocked or restricted.
  - 1. Immediately notify Architect of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
  - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- F. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
  - 1. Prevent debris from entering or blocking roof drains and conductors.
    - a. Use roof-drain plugs specifically designed for this purpose.

- b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
    - a. Do not permit water to enter into or under existing roofing system components that are to remain.

### 3.2 ROOF TEAR-OFF

- A. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- B. Full Roof Tear-off: Where indicated on Drawings, remove existing roofing and other roofing system components down to the existing roof deck.
  1. Remove roof insulation.
  2. Remove base flashings and counter flashings.
  3. Remove perimeter edge flashing and gravel stops.
  4. Remove copings.
  5. Remove expansion-joint covers.
  6. Remove flashings at pipes, curbs, mechanical equipment, and other penetrations.
  7. Remove wood blocking, curbs, and nailers.
  8. Remove fasteners from deck.

### 3.3 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect.
  1. Do not proceed with installation until directed by Architect.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
  1. Do not proceed with installation until directed by Architect.

### 3.4 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
  1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain.

1. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish as existing.
- C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.
1. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.

END OF SECTION

**NOT FOR BIDDING PURPOSES**

**SECTION 07 53 23**

**ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Adhered ethylene-propylene-diene-terpolymer (EPDM) roofing system.
2. Roof insulation.
3. Cover board.
4. Walkways.

1.2 PREINSTALLATION MEETINGS

- A. Preliminary Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product:

1. For insulation and roof system component fasteners, include copy of FM Approvals' RoofNav listing.

B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:

1. Layout and thickness of insulation.
2. Base flashings and membrane terminations.
3. Flashing details at penetrations.
4. Tapered insulation, thickness, and slopes.
5. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples: For the following products:

1. Roof membrane and flashings of color required.
2. Walkway pads of color required.

D. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

1.4 INFORMATIONAL SUBMITTALS

A. Manufacturer Certificates:

1. Performance Requirement Certificate: Signed by roof membrane manufacturer, certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
    - a. Submit evidence of complying with performance requirements.
  2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.
- B. Product Test Reports: For components of roof membrane and insulation, for tests performed by a qualified testing agency, indicating compliance with specified requirements.
- C. Sample warranties.
- 1.5 CLOSEOUT SUBMITTALS
- A. Maintenance data.
- 1.6 QUALITY ASSURANCE
- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- 1.7 WARRANTY
- A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of EPDM roofing that fail in materials or workmanship within specified warranty period.
1. Special warranty includes EPDM roofing membrane, base flashings, fascia, roof insulation, fasteners, cover boards, roofing accessories, and other components of EPDM roofing, including Roof Specialties section 07 71 00.
  2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of EPDM roofing such as roofing membrane, base flashing, fascia, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
1. Warranty Period: Two years from date of Substantial Completion.

## PART 2 - PRODUCTS



## 2.1 PERFORMANCE REQUIREMENTS

- A. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
- B. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D 3746, ASTM D 4272, or the Resistance to Foot Traffic Test in FM Approvals 4470.
- C. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials shall comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and shall be listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.
  1. Fire/Windstorm Classification: Class 1A-90.
  2. Hail-Resistance Rating: MH.
- D. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class B; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- E. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

## 2.2 ETHYLENE-PROPYLENE-DIENE-TERPOLYMER (EPDM) ROOFING

- A. EPDM Sheet: ASTM D 4637/D 4637M, Type II, scrim or fabric internally reinforced, EPDM sheet with factory-applied seam tape.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Carlisle SynTec Incorporated.
    - b. Firestone Building Products.
    - c. Johns Manville; a Berkshire Hathaway company.
  2. Thickness: 60 mils, nominal.
  3. Exposed Face Color: Black.

## 2.3 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
  1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: 60-mil-thick EPDM, partially cured or cured, according to application.
- C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- D. Bonding Adhesive: Manufacturer's standard.

- E. Modified Asphaltic Low VOC bonding Adhesive: Roofing system manufacturer's standard modified asphalt, asbestos-free, cold-applied adhesive formulated for compatibility and use with fabric-backed membrane roofing.
- F. Water-Based, Low VOC bonding Adhesive: Roofing system manufacturer's standard water-based, cold-applied adhesive formulated for compatibility and use with fabric-backed membrane roofing.
- G. Seaming Material: Factory-applied seam tape, width as recommended by manufacturer.
- H. Lap Sealant: Manufacturer's standard, single-component sealant.
- I. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.
- J. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- K. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, molded pipe boot flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.
  - 1. Provide white flashing accessories for white EPDM membrane roofing.

#### 2.4 ROOF INSULATION

- A. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Carlisle SynTec Incorporated.
    - b. Firestone Building Products.
    - c. Johns Manville; a Berkshire Hathaway company.
  - 2. Size: 48 by 48 inches.
  - 3. Thickness:
    - a. Base Layer: 1-1/2 inches, min.
    - b. Upper Layer: As required to meet insulation value of R-25 with cover board, or use Composite Polyisocyanurate Board Insulation if not using separate cover board.

- B. Composite Polyisocyanurate Board Insulation: ASTM C 1289 for each face, with factory-applied high density polyisocyanurate facing board adhered to normal density polyisocyanurate board. Each with coated glass facers.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Carlisle SynTec Incorporated.
    - b. Firestone Building Products.
    - c. Johns Manville; a Berkshire Hathaway company.
  2. Size: 48 by 48 inches.
  3. Thickness:
    - a. As required to meet Insulation value of R-25. Provide a minimum of 2 layers of insulation.
- C. Tapered Insulation: Provide factory-tapered insulation boards
1. Material: Match roof insulation.
  2. Minimum Thickness: 1/4 inch.
  3. Slope:
    - a. Roof Field: 1/4 inch per foot unless otherwise indicated on Drawings.
    - b. Saddles and Crickets: 1/2 inch per foot unless otherwise indicated on Drawings.

## 2.5 INSULATION ACCESSORIES

- A. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.
- B. Cover Board: ASTM C 208, Type II, Class 4, Grade 1, 1/2 inch thick polyisocyanurate, with a minimum compressive strength of 80 psi.

## 2.6 ASPHALT MATERIALS

- A. Roofing Asphalt: ASTM D 312/D 312M, Type III or Type IV.
- B. Asphalt Primer: ASTM D 41/D 41M.

## 2.7 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads, approximately 3/16 inch thick and acceptable to roofing system manufacturer.
1. Size: Approximately 30 by 30 inches
  2. Color: Contrasting with roof membrane.

PART 3 - EXECUTION

3.1 ROOFING INSTALLATION, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions, FM Approvals' RoofNav assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- C. Install roof membrane and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition.

3.2 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.
- B. Comply with roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Installation Over Metal Decking:
  - 1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows and with long joints continuous at right angle to flutes of decking.
    - a. Locate end joints over crests of decking.
    - b. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
    - c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    - d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
    - e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
      - 1) Trim insulation so that water flow is unrestricted.
    - f. Fill gaps exceeding 1/4 inch with insulation.
    - g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
    - h. Loosely lay base layer of insulation units over substrate.
    - i. Mechanically attach base layer of insulation using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to metal decks.
      - 1) Fasten insulation according to requirements in FM Approvals' RoofNav for specified Windstorm Resistance Classification.

- 2) Fasten insulation to resist specified uplift pressure at corners, perimeter, and field of roof.
2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.
    - a. Staggered end joints within each layer not less than 24 inches in adjacent rows.
    - b. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.
    - c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    - d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
    - e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
    - f. Trim insulation so that water flow is unrestricted.
    - g. Fill gaps exceeding 1/4 inch with insulation.
    - h. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
    - i. Loosely lay each layer of insulation units over substrate.
    - j. Adhere each layer of insulation to substrate using adhesive according to FM Approvals' RoofNav assembly requirements and FM Global Property Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification, as follows:
      - 1) Set each layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.
      - 2) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
      - 3) Set each layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

### 3.3 INSTALLATION OF COVER BOARDS

- A. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction.
  1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
  2. At internal roof drains, conform to slope of drain sump.
    - a. Trim cover board so that water flow is unrestricted.
  3. Cut and fit cover board tight to nailers, projections, and penetrations.
  4. Loosely lay cover board over substrate.
  5. Adhere cover board to substrate using adhesive according to FM Approvals' RoofNav assembly requirements and FM Global Property Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification, as follows:
    - a. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

- b. Set cover board in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

### 3.4 ADHERED ROOFING INSTALLATION

- A. Adhere roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.
- B. Unroll membrane roof membrane and allow to relax before installing.
- C. Start installation of roofing in presence of roofing system manufacturer, technical personnel and Owner's testing and inspection agency.
- D. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer, and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.
- F. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeters.
- G. Apply roof membrane with side laps shingled with slope of roof deck where possible.
- H. Factory-Applied Seam Tape Installation: Clean and prime surface to receive tape.
  1. Firmly roll side and end laps of overlapping roof membrane to ensure a watertight seam installation.
  2. Apply lap sealant and seal exposed edges of roofing terminations.
- I. Spread sealant or mastic bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

### 3.5 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

### 3.6 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products according to manufacturer's written instructions.
1. Install flexible walkways at the following locations:
    - a. Perimeter of each rooftop unit.
    - b. Between each rooftop unit location, creating a continuous path connecting rooftop unit locations.
    - c. Between each roof hatch and each rooftop unit location or path connecting rooftop unit locations.
    - d. Top and bottom of each roof access ladder.
    - e. Between each roof access ladder and each rooftop unit location or path connecting rooftop unit locations.
    - f. Locations indicated on Drawings.
    - g. As required by roof membrane manufacturer's warranty requirements.
  2. Provide 6-inch clearance between adjoining pads.
  3. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.7 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

### 3.8 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS <Insert name> of <Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
1. Owner: <Insert name of Owner>.
  2. Address: <Insert address>.
  3. Building Name/Type: <Insert information>.
  4. Address: <Insert address>.
  5. Area of Work: <Insert information>.
  6. Acceptance Date: <Insert date>.
  7. Warranty Period: <Insert time>.
  8. Expiration Date: <Insert date>.



- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. peak gust wind speed exceeding <Insert wind speed> mph (m/s);
    - c. fire;
    - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
    - f. vapor condensation on bottom of roofing; and
    - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals whether authorized or unauthorized by Owner.
  2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
  3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects on work.
  4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
  5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
  6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
  7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources



lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

1. Authorized Signature: <Insert signature>.
2. Name: <Insert name>.
3. Title: <Insert title>.

END OF SECTION

**NOT FOR BIDDING PURPOSES**

**SECTION 07 71 00**  
**ROOF SPECIALTIES**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Copings.
2. Roof-edge specialties.
3. Roof-edge drainage systems.
4. Reglets and counterflashings.
5. Retrofit clamping collar and dome.

B. Preinstallation Conference: Conduct conference at Project site.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For roof specialties.

1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.

C. Samples: For each type of roof specialty and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For tests performed by a qualified testing agency.

B. Sample warranty.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing specialties to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are FM Approvals listed for specified class and SPRI ES-1 tested to specified design pressure.

## 1.6 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions in Section 07 53 23 - "Ethylene-Propylene-Diene-Monomer (EPDM) Roofing."
- B. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
  1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  2. Finish Warranty Period: 20 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. FM Approvals' Listing: Manufacture and install copings and roof-edge specialties that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with FM Approvals' markings.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

### 2.2 COPINGS

- A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet, concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Architectural Products, Co.
    - b. Hickman Company, W.P.
    - c. Metal-Era, Inc.
  2. Formed Aluminum Sheet Coping Caps: Aluminum sheet, 0.050 inch thick.

- a. Surface: Smooth, flat finish.
  - b. Finish: Two-coat fluoropolymer.
  - c. Color: As selected by Architect from manufacturer's full range.
3. Corners: Factory mitered and continuously welded.
  4. Coping-Cap Attachment Method: Snap-on or face leg hooked to continuous cleat with back leg fastener exposed, fabricated from coping-cap material.
    - a. Snap-on Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches wide, with integral cleats.
    - b. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet.

### 2.3 ROOF-EDGE SPECIALTIES

- A. Canted Roof-Edge Fascia and Gravel Stop: Manufactured, two-piece, roof-edge fascia consisting of compression-clamped metal fascia cover in section lengths not exceeding 12 feet and a continuous formed galvanized-steel sheet cant, 0.028 inch thick, minimum, with extended vertical leg terminating in a drip-edge cleat. Provide matching corner units.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Architectural Products, Co.
    - b. Hickman Company, W.P.
    - c. Metal-Era, Inc.
  2. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.050 inch thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Two-coat fluoropolymer.
    - c. Color: As selected by Architect from manufacturer's full range.
  3. Corners: Factory mitered and continuously welded.
  4. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
  5. Fascia Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim, and Overflow scuppers.
- B. One-Piece Gravel Stops: Manufactured, one-piece, metal gravel stop in section lengths not exceeding 12 feet, with a horizontal flange and vertical leg fascia terminating in a drip edge, and concealed splice plates of same material, finish, and shape as gravel stop. Provide matching corner units.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Architectural Products, Co.
    - b. Hickman Company, W.P.
    - c. Metal-Era, Inc.
  2. Formed Aluminum Sheet Gravel Stops: Aluminum sheet, 0.050 inch thick.

- a. Surface: Smooth, flat finish.
  - b. Finish: Two-coat fluoropolymer.
  - c. Color: As selected by Architect from manufacturer's full range.
3. Corners: Factory mitered and continuously welded.
  4. Accessories: Fascia extenders with continuous hold-down cleats.

## 2.4 ROOF-EDGE DRAINAGE SYSTEMS

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Architectural Products, Co.
  - b. Hickman Company, W.P.
  - c. Metal-Era, Inc.
- B. Gutters: Manufactured in uniform section lengths not exceeding 12 feet, with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch above front edge. Furnish flat-stock gutter straps, gutter brackets, expansion joints, and expansion-joint covers fabricated from same metal as gutters.
  1. Aluminum Sheet: 0.063 inch thick.
  2. Gutter Profile: Style K according to SMACNA's "Architectural Sheet Metal Manual."
  3. Corners: Factory mitered and continuously welded.
  4. Gutter Supports: Gutter brackets with finish matching the gutters.
- C. Downspouts: Plain rectangular complete with mitered elbows, manufactured from the following exposed metal. Furnish with metal hangers, from same material as downspouts, and anchors.
  1. Formed Aluminum: 0.063 inch thick.
- D. Parapet Scuppers: Manufactured with closure flange trim to exterior, 4-inch-wide wall flanges to interior, and base extending 4 inches beyond cant or tapered strip into field of roof.
  1. Formed Aluminum: 0.050 inch thick.
- E. Aluminum Finish: Two-coat fluoropolymer.
  1. Color: As selected by Architect from manufacturer's full range.

## 2.5 REGLETS AND COUNTERFLASHINGS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Castle Metal Products.
  2. Hickman Company, W.P.
  3. Metal-Era, Inc.

- B. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counterflashing pieces, from the following exposed metal:

1. Formed Aluminum: 0.050 inch thick.
2. Corners: Factory mitered and continuously welded.
3. Surface-Mounted Type: Provide reglets with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
4. Concrete Type, Embedded: Provide temporary closure tape to keep reglet free of concrete materials, special fasteners for attaching reglet to concrete forms, and guides to ensure alignment of reglet section ends.
5. Masonry Type, Embedded: Provide reglets with offset top flange for embedment in masonry mortar joint.
6. Multiuse Type, Embedded: For multiuse embedment.

- C. Counterflashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches and in lengths not exceeding 12 feet designed to snap into reglets and compress against base flashings with joints lapped, from the following exposed metal:

1. Formed Aluminum: 0.050 inch thick.

- D. Accessories:

1. Flexible-Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where reglet is provided separate from metal counterflashing.
2. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing lower edge.

- E. Aluminum Finish: Two-coat fluoropolymer.

1. Color: As selected by Architect from manufacturer's full range.

## 2.6 MATERIALS

- A. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.

## 2.7 UNDERLAYMENT MATERIALS

Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Carlisle Coatings & Waterproofing, Inc.

- b. Metal-Fab Manufacturing, a Drexel Metals Company.
  - c. Owens Corning.
2. Thermal Stability: ASTM D 1970/D 1970M; stable after testing at 240 deg F.
  3. Low-Temperature Flexibility: ASTM D 1970/D 1970M; passes after testing at minus 20 deg F.

## 2.8 MISCELLANEOUS MATERIALS

- A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
  1. Exposed Penetrating Fasteners: Gasketed screws with hex washer head, matching color of sheet metal.
  2. Fasteners for Copper Sheet: Copper, hardware bronze, or passivated Series 300 stainless steel.
  3. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
  4. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
  5. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.
- B. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- C. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.

## 2.9 FINISHES

- A. Coil-Coated Galvanized-Steel Sheet Finishes:
  1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with ASTM A 755/A 755M and coating and resin manufacturers' written instructions.
    - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat.
- B. Coil-Coated Aluminum Sheet Finishes:
  1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat.

## 2.10 RETROFIT CLAMPING COLLAR AND DOME

- A. Basis of Design Product: Subject to compliance with requirements, provide Jay R. Smith Mfg. Co. Universal Roof Drain Membrane clamping collar and dome or comparable product.

## PART 3 - EXECUTION

### 3.1 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.
1. Apply continuously under copings, roof-edge specialties, and reglets and counterflashings.
  2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.

### 3.2 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
  2. Provide uniform, neat seams with minimum exposure of solder and sealant.
  3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
  4. Torch cutting of roof specialties is not permitted.
  5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise indicated on Drawings.



2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.
- F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.

### 3.3 COPING INSTALLATION

- A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
  1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at manufacturer's required spacing that meets performance requirements.
  2. Interlock face-leg drip edge into continuous cleat anchored to substrate at manufacturer's required spacing that meets performance requirements. Anchor back leg of coping with screw fasteners and elastomeric washers at 24-inch centers manufacturer's required spacing that meets performance requirements.

### 3.4 ROOF-EDGE SPECIALTIES INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

### 3.5 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.
- B. Gutters: Join and seal gutter lengths. Allow for thermal expansion. Attach gutters to firmly anchored gutter supports spaced not more than 12 inches apart. Attach ends with rivets and seal with sealant to make watertight. Slope to downspouts.
  1. Install gutter with expansion joints at locations indicated but not exceeding 50 feet apart. Install expansion-joint caps.

- C. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c.
  - 1. Provide elbows at base of downspouts at grade to direct water away from building.
  - 2. Connect downspouts to underground drainage system indicated.
- D. Parapet Scuppers: Install scuppers through parapet where indicated. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.

### 3.6 REGLET AND COUNTERFLASHING INSTALLATION

- A. Surface-Mounted Reglets: Install reglets to receive flashings where flashing without embedded reglets is indicated on Drawings. Install at height so that inserted counterflashings overlap 4 inches over top edge of base flashings.
- B. Counterflashings: Insert counterflashings into reglets or other indicated receivers; ensure that counterflashings overlap 4 inches over top edge of base flashings. Lap counterflashing joints a minimum of 4 inches and bed with butyl sealant. Fit counterflashings tightly to base flashings.

### 3.7 CLAMPING COLLAR AND DOME INSTALLATION

- A. Install clamping collar and dome in accordance with manufacturers' instructions.
- B. Tap out existing dome bolt threads to ensure new fasteners properly clamp collar in place.

### 3.8 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed.

END OF SECTION

**SECTION 07 71 29**

**MANUFACTURED ROOF EXPANSION JOINTS**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Flanged bellows-type roof expansion joints.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For roof expansion joints.
- C. Samples: For each exposed product and for each color specified.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification data.
- B. Product test reports.
- C. Sample warranty.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of roofing membrane.

1.6 WARRANTY

- A. Special Warranty: Manufacturer and Installer agree to repair or replace roof expansion joints and components that leak, deteriorate beyond normal weathering, or otherwise fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

**NOT FOR BIDDING PURPOSES**

- B. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof expansion joints that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 FLANGED BELLOWS-TYPE ROOF EXPANSION JOINTS

- A. Flanged Bellows-Type Roof Expansion Joint: Factory-fabricated, continuous, waterproof joint cover consisting of exposed membrane bellows laminated to flexible, closed-cell support foam, and secured along each edge to 3- to 4-inch-wide metal flange.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Architectural Art Manufacturing Inc.; a division of Pittcon Architectural Metals, LLC.
  - b. Johns Manville; a Berkshire Hathaway company.
  - c. Watson Bowman Acme Corp.
2. Source Limitations: Obtain flanged bellows-type roof expansion joints approved by roofing manufacturer and that are part of roofing membrane warranty.
3. Bellows: EPDM flexible membrane, nominal 60 mils thick.
4. Flanges: Galvanized steel, 0.022 inch thick.
5. Corner, Intersection, and Transition Units: Provide factory-fabricated units for corner and joint intersections and horizontal and vertical transitions including those to other building expansion joints.
6. Accessories: Provide splicing units, adhesives, and other components as recommended by roof-expansion joint manufacturer for complete installation.
7. Secondary Seal: Continuous, waterproof membrane within joint and attached to substrate on sides of joint below the primary bellows assembly.
  - a. Drain-Tube Assemblies: Equip secondary seal with drain tubes and seals to direct collected moisture to exterior-wall expansion joint cover.
  - b. Thermal Insulation: Fill space above secondary seal with manufacturer's standard, factory-installed mineral-fiber insulation; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84.

B. Materials:

1. Galvanized-Steel Sheet: ASTM A 653/A 653M, hot-dip zinc-coating designation G90.
2. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304.
3. EPDM Membrane: ASTM D 4637/D 4637M, type standard with manufacturer for application.

## 2.2 MISCELLANEOUS MATERIALS

- A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to withstand design loads.
  - 1. Exposed Fasteners: Gasketed. Use screws with hex washer heads matching color of material being fastened.
- B. Mineral-Fiber Blanket: ASTM C 665.
- C. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General: Comply with manufacturer's written instructions for handling and installing roof expansion joints.
  - 1. Anchor roof expansion joints securely in place, with provisions for required movement. Use fasteners, protective coatings, sealants, and miscellaneous items as required to complete roof expansion joints.
  - 2. Install roof expansion joints true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
  - 3. Provide for linear thermal expansion of roof expansion joint materials.
- B. Directional Changes: Install factory-fabricated units at directional changes to provide continuous, uninterrupted, and watertight joints.
- C. Transitions to Other Expansion-Control Joint Assemblies: Coordinate installation of roof expansion joints with other exterior expansion-control joint assemblies specified in Section 079513.13 "Exterior Expansion Joint Cover Assemblies" to result in watertight performance. Install factory-fabricated units at transitions between roof expansion joints and exterior expansion-control joint systems.
- D. Splices: Splice roof expansion joints to provide continuous, uninterrupted, and waterproof joints.
  - 1. Install waterproof splices and prefabricated end dams to prevent leakage of secondary-seal membrane.
- E. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.

END OF SECTION

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**SECTION 07 92 00**

**JOINT SEALANTS**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
1. Silicone joint sealants.
  2. Urethane joint sealants.
  3. Preformed joint sealants.

1.3 SUBMITTALS, GENERAL

- A. General: Submit all action submittals (except Samples for Verification) and informational submittals required by this Section concurrently.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint sealant product indicated.
1. Single-component, nonsag, neutral-curing silicone joint sealant.
  2. Single-component, nonsag, urethane joint sealant.
  3. Bond-breaker tape.
  4. Primer.
  5. Cleaners for nonporous surfaces.
  6. Masking tape.
  7. Cylindrical sealant backings.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
1. Joint-sealant application, joint location, and designation.

2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
  1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

#### 1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
  2. When joint substrates are wet.
  3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.



- B. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.
- C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- D. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- E. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

## 2.2 SILICONE JOINT SEALANTS

- A. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Dow Corning Corporation; 790.
    - b. GE Advanced Materials - Silicones; SilPruf LM SCS2700.
    - c. Pecora Corporation; 89.
    - d. Tremco Incorporated; Spectrem 1.

## 2.3 URETHANE JOINT SEALANTS

- A. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BASF Building Systems; Sonolastic NP1.
    - b. Pecora Corporation; Dynatrol I-XL.
    - c. Sika Corporation, Construction Products Division; Sikaflex - 1a.
    - d. Tremco Incorporated; Dymonic.

## 2.4 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.
- C. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or Type O (open-cell material), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

## 2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Beginning installation constitutes Contractor's acceptance of substrates and conditions.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
  3. Remove laitance and form-release agents from concrete.

4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  1. Do not leave gaps between ends of sealant backings.
  2. Do not stretch, twist, puncture, or tear sealant backings.
  3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  1. Place sealants so they directly contact and fully wet joint substrates.
  2. Completely fill recesses in each joint configuration.
  3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

- G. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping. Do not pull or stretch material. Produce seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures, apply heat to sealant in compliance with sealant manufacturer's written instructions.

### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

### 3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints up to 1 inch wide in horizontal nontraffic surfaces.

1. Joint Locations:

- a. Control and expansion joints.
- b. Other joints as indicated.

2. Joint Sealant: Single component, nonsag, urethane joint sealant.

- B. Joint-Sealant Application: Exterior joints in vertical surfaces.

1. Joint Locations:

- a. Joints between metal panels.
- b. Joints between different materials.
- c. Other joints as indicated.

2. Joint Sealant: Single component, nonsag, neutral curing, silicone joint sealant.

END OF SECTION