

Delaware Technical Community College

SPECIFICATIONS
FOR

NOT FOR
OWENS CAMPUS –
PARKING LOT TREATMENT

IN

Georgetown, Delaware
BIDDING

PREPARED
BY

Verdant LLC
ISSUED FOR BIDDING
10/03/2024
PURPOSES

SECTION 00 01 10

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INVITATION TO BID

Sealed bids for DTCC Contract No. DTCC C9004020004, will be received by the Delaware Technical Community College, at the **Facilities office, Owens Campus, 21179 College Drive, Georgetown, DE 19947** until **11:00 AM** local time on **November 6, 2024**, 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 after the stated time will be returned unopened.

Project involves pavement rehabilitation at Delaware Technical Community College's Owens Campus.

A Mandatory Pre-Bid Meeting will be held **October 21, 2024**, at **10:00 AM** at the **Facilities office, Owens Campus, 21179 College Drive, Georgetown, DE 19947** for the purpose of establishing the listing of subcontractors and to answer questions. **ATTENDANCE AT THIS MEETING IS COMPULSORY BUT NOT A PREREQUISITE FOR BIDDING ON THIS CONTRACT.**

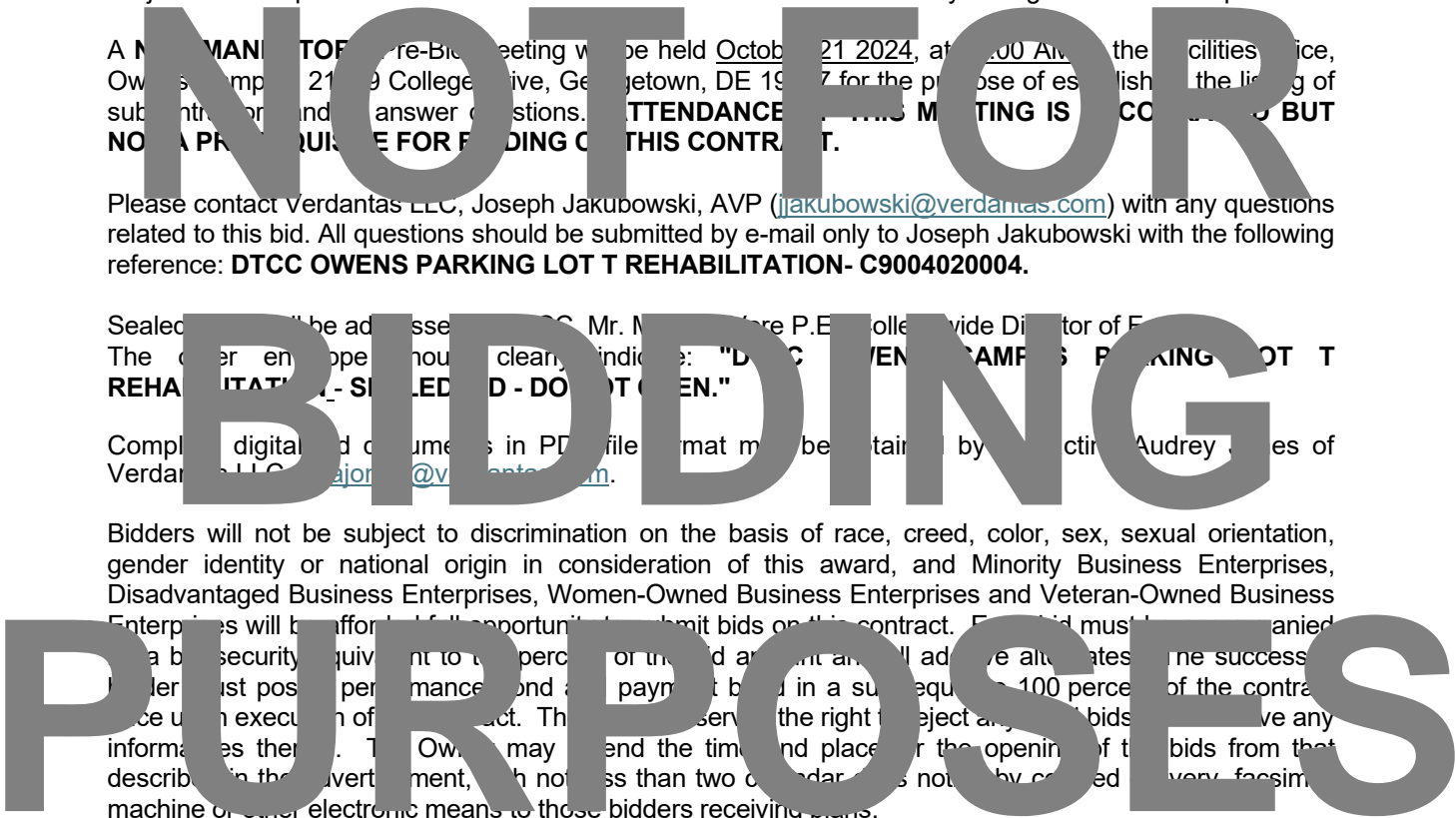
Please contact Verdantas LLC, Joseph Jakubowski, AVP (jjakubowski@verdantas.com) with any questions related to this bid. All questions should be submitted by e-mail only to Joseph Jakubowski with the following reference: **DTCC OWENS PARKING LOT T REHABILITATION- C9004020004.**

Sealed bids will be addressed to DTCC, Mr. Matthew P. Egan, College-wide Director of Facilities. The cover envelope should clearly indicate: **"DTCC OWENS CAMPUS PARKING LOT T REHABILITATION - SEALED BID - DO NOT OPEN."**

Complete digital bid documents in PDF file format may be obtained by contacting Audrey Jones of Verdantas LLC (ajones@verdantas.com).

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 the percentage of the bid amount and all advance alternatives. The bidder must post performance and payment bonds in a subsequent 100 percent of the contract price upon execution of the contract. The Owner reserves the right to reject any and all bids. We have any information thereon. The Owner may amend 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 mail, very facsimile machine or other electronic means to those bidders receiving plans.

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SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

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NOT FOR

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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, Instructions 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 bids and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, as well as the Drawing 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 Contractor, Drawings (if any), Specifications (Project Manual and Addenda).

1.7 AGREEMENT: The form of the agreement shall be AIA Document A191 as modified by the Owner's Amendment, Standard form of agreement between Owner and Contractor where the basis of contract is a Standard Specification. 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 Contract Documents and to construction generally contained in summary, requirements of law 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, which constitute and amend all or part of 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 SUPPLIER: The corporate body which is bound with and by the Contract, of which it is a member, and which engages to be responsible for the contractor's payments and debts pertaining to and his acceptable performance of the Work for which it has contracted.
- 1.18 BIDDER'S POSIT: The security designed 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 entered into a 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 performance on the part of the contractor to execute the work according to the terms of the contract.
- 1.23 CUSTOM FABRICATION: As defined in 29 Del. C. § 122, "the term 'custom fabrication' means the on-site fabrication, assembly, or other production of non-standard goods or materials, including components, for parts or parts of specified public works project. Such goods and materials shall include those used in the following trades or systems: (1) Plumbing or pipe fitting systems, including heating, ventilating, air-conditioning, refrigeration systems, sheet metal or other duct systems; (2) Electrical systems; (3) Mechanical insulation work; (4) Ornamental iron work; and (5) Commercial signage that does not attempt or appear to direct the movement of traffic on highways or roadways or interfere with, imitate, or resemble any official traffic sign, signal or device.

ARTICLE 2: BIDDER'S REPRESENTATION

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 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 on their own.
- 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 Bonds, Performance Bonds, Material and 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.
- 2.3.6 Both Joint Venturers shall include their Federal Tax Identification 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.

ARTICLE 2: ASSIGNMENT OF CONTRACT RIGHTS AND OBLIGATIONS

2.1 The Bidder, by its bid, irrevocably and exclusively assigns, transfers, conveys, and conveys all or its right, title, and interest in and to all known or unknown cause of action, presently has or hereafter acquires, under the antitrust laws of 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 shall provide clarification or interpretation of 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 shall 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, power, fuel, utilities, transportation, and other facilities and services necessary for 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 and products specified in the Contract Documents shall be of the highest standard of quality required for the Work and shall conform to the dimensions and appearance to be met by the proposed substitution. The specifications for a particular material, product or manufacturer is not intended to be proprietary in any way. Substitution of products of the same 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 the specific material named. 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.

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 2 calendar 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. Notwithstanding, a bidder could be held responsible for not receiving a non-responsive Bid.

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 at this time.

4.1.3 Execute all blanks on the Bid Form in a non-erasable medium (type writing or manually in ink).

4.1.4 Where indicated by the makeup on the Bid Form, expressions must be both words and figures. A casual discrepancy between the two shall be corrected.

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 Bid Form, an alternate shall be entered "no change". The Contractor is responsible for verifying that they have received all addenda issued during the bidding period. Where required, 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 a signed Affidavit for the Bidder 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 and need not be specifically identified but must be for a sum equal to 10% of the bid plus all add alternates to which it relates and not to exceed the amount stated herein, if said sum is equal to at least 10% of the bid. The Bidder must use the standard OMB form (attached).

4.2.2 The Agency has the right to retain the bid security of Bidder from award until 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 a successful bidder failing to execute a formal contract and bid within 20 days of awarding of the contract, the bid bond or security deposited by the successful bidder shall be forfeited.

4.3 SUBCONTRACTOR LIST

4.3.1 In accordance with Title 29, Chapter 69, Section 6962(d)(10)b of the Delaware Code, 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.** The bidder must list **in each category** the full name and address (City & State) of the sub-contractor that they intend to be used to perform the work and provide the full name and address of the sub-contractor category. The Bidder's listed subcontractor intend to provide any third-tier subcontractor category of work through a third-tier contractor. The Bidder shall list the third-tier contractor's full name and address (City & State). **The Bidder intends to perform any category of work itself, must list its full name and address.** For clarification, if the Bidder intends to perform the work themselves, the Bidder must insert "not applicable", "N/A", "self" or anything other than its own full name and address (City & State). To do so shall cause the bid to be rejected. In addition, the failure to produce a completed subcontractor list with the bid submittal shall cause the bid to be rejected. If you have more than three (3) third-tier contractors to report in any subcontractor category, print out additional page(s) containing the appropriate category, complete the rest of your list of third-tier contractors for that category, notate the addition in parentheses as (CONTINUATION) next to the subcontractor category and an asterisk (*) next to any additional third-tier contractors, and submit it with your bid.

4.3.2 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 AFFIDAVIT OF CONTRACTOR QUALIFICATIONS

4.4.1 In accordance with Title 29, Chapter 69, Section 6962(d)(10)b.3 of the Delaware Code, each Bidder shall submit with their Bid the Affidavit of Contractor Qualifications certifying that the Bidder will abide by the contractor's qualifications outlined in the construction bid specifications for the duration of the contract term. After a contract has been awarded the successful bidder shall not substitute another subcontractor whose name was submitted on the Subcontractor Form except for the reasons in the statute and not without written consent from the awarding agency. Failure to utilize the subcontractors on the list will subject the successful bidder to penalties as outlined in the General Requirements Section 5.2 of the contract.

4.5 AFFIDAVIT OF CRAFT TRAINING COMPLIANCE

4.5.1 In accordance with Title 29, Chapter 69, Section 6962(c)(13) of the Delaware Code, contractor and subcontractor must provide training to employees at the same level as all of the following apply:

- A. A project meets the prevailing wage requirements under Title 29, Chapter 69, Section 6960 of the Delaware Code.
- B. Contractor employs 10 or more total employees.
- C. The project is not a federal highway project.

Failure to provide required craft training on the project may subject the successful contractor and/or subcontractor(s) to penalties as outlined in Title 29, Chapter 69, Section 6962(c)(13) of the Delaware Code.

Bidders shall submit the Affidavit of Craft Training Compliance for the contract execution.

4.6 EQUALITY OF EMPLOYMENT OPPORTUNITIES IN PUBLIC WORKS

4.6.1 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 shall take affirmative action 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; pay or 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."

4.7 PREVAILING WAGE REQUIREMENT

4.7.1 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.

4.7.2 The employer shall pay all mechanics and labors employed directly upon the site of work, or engaged in custom fabrication work, as that term is defined in Article 1.23 herein and as also as defined in 29 Del. C. § 6902 and described in 29 Del. C. § 6960(b), regardless of where the work is performed, 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.

4.7.3 As per 29 Del. C. § 6960(b), the scale of the wages to be paid must be posted by the employer in a prominent and easily accessible place at the site of the work. There may be withheld from the employer so much of accrued payments as may be considered necessary by the Department of Labor to pay laborers and mechanics employed by the employer the difference between the rates of wages required by the contract to be paid laborers and mechanics and the wages actually supplied and the amount to be withheld to be remitted to the Department of Labor for distribution upon resolution of any claims.

4.7.4 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.

4.8 SUBMISSION OF BIDS

4.8.1 Enclose the Bid and 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 on 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 - CLOSED" on the face thereof. The State is not responsible for the opening of bids prior to the closing date if that amount is not properly marked.

4.8.2 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.

4.8.3 Bidder assumes full responsibility for timely delivery at location designated for receipt of bids.

4.8.4 Oral, telephonic or telegraphic bids are invalid and will not receive consideration.

4.8.5 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.

4.9 MODIFICATION OR WITHDRAW OF BIDS

4.9.1 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.

4.9.2 Bidders submitting Bids that are late shall be notified as soon as practicable and the bid shall be returned.

- 4.9.3 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 days 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. 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 reject any Bids, in whole or in part, for any portion thereof, and to advise for any Bid to proceed to the work or otherwise or to abandon the work, in the judgment of the Agency or its agents, in the best interest of the State.

- 5.2.3 An increase or decrease in the quantity for any item is not subject grounds for an increase or decrease in 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 quantity increase or substitution or alteration in the Bid Alternates will be considered in determining the low bid except as may be otherwise hereinafter noted. Cash discounts should be contacted and incorporated in the Bid Price.

5.3 QUALIFICATION 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 unauthorized additions, interjections, conditional or alternative bids or regulations of any kind which may tend to make the Bid incomplete, indefinite or ambiguous as to its meaning.

5.3.3.6 If the Bids are not accompanied by the required Security and other documents required by the Bidding Documents.

5.3.3.7 If any exceptions or qualifications of the Bid are noted on the Bid Form.

ARTICLE 10. AWARD OF BID CONTRACT

5.4.1 A formal contract shall be executed with the successful Bidder within two (2) calendar days after the award of the contract.

5.4.2 Under Section 6962 (13) Title 29, Delaware Code, "The awarding authority 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. Any public school district and its board shall award public works contracts in accordance with this section's requirements except it shall award the contract within 60 days of the bid opening."

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 Requirement, within twenty (20) days of official notice of contract award. The successful Bidder shall provide, at least two business days prior to contract execution, copies of the Employee 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 two (2) years after the date of the Certificate of Final Payment.
- 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 as advertised. The Agency may do as it sees fit.
- 5.4.7 Each bidder shall supply with its bid its taxpayer identification number (i.e., general employer identification number or social security number) and should the bidder be awarded a contract, such vendor shall provide to the agency the taxpayer identification numbers of such subcontractors. Such numbers shall be provided to the agency on 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, subcontractors/independent contractors hired or contracted more than 20 days after the Bidder entered into public works contract, the Delaware Business license of such subcontractor/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. CONTRACTOR'S QUALIFICATION STATEMENT
- 6.1.1 Bidders when an award of a Contract is under consideration, shall, if requested by the Agency, submit a properly executed AIA Document 305, Contractor's Qualification Statement, unless such statement has been previously received by the Agency.
- 6.2 Bidders to whom an award of a Contract has been made must produce their Delaware Business License before the Contract can be executed.

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 OWNER AND CONTRACTOR

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

END OF SECTION

**NOT FOR
BIDDING
PURPOSES**

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

BID FORM

For Bids Due: November 6, 2024

To: Delaware Technical Community College
Facilities office,
Owens Campus,
21179 College Drive,
Georgetown, DE 19947

Name of Bidder: _____

Delaware Business License No. _____ Driver ID No. _____

(Other License Nos.) _____

Phone No.: () _____ - _____

Fax No.: () _____ - _____

The undersigned certifies that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and examined himself with the location and 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, fuel, equipment, supplies, transportation and other facilities required to execute the work described by the aforementioned documents for the lump sum itemized amount of

\$ _____
(\$ _____)

NOT FOR BIDDING PURPOSES

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

BID FORM

UNIT PRICES

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

UNIT PRICE No. 1: _____ GABC (_____ ft) \$ _____

UNIT PRICE No. 2: _____ Block (Each) \$ _____

UNIT PRICE No. 3: _____ \$ _____

**NOT FOR
BIDDING
PURPOSES**

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

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 what being furnished by the Contractors on the list of this bid.
Should I/We be awarded this contract, I/We agree to achieve substantial completion of 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 _____ of the _____ of this Bid, I/We shall, within _____ (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificate required by the Contract Documents.

I am / We are an Individual / Partnership / Corporation

By _____ as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

I understand the purposes of this bid are:
PURPOSES

Witness: _____ By: _____
(SEAL) (Authorized Signature)

(Title)
Date: _____

ATTACHMENTS

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

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

BID FORM

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 962, Section 10(b) of the Delaware Code, the following subcontractor listing must accompany any bid submittal. The bidder must list **in each category** the full name and address (City & State) of the subcontractor that the bidder is using to perform the work and the material for that subcontractor category. Should the bidder's listed subcontractor intend to provide any of the subcontractor category of work through a third-tier contractor, the bidder shall list that third-tier contractor's full name and address (City & State). **If the bidder intends to perform any category of work itself, it must list its name and address.** For clarification, if the bidder intends to perform the work themselves, the bidder may not insert "not applicable", "N/A", "self" or anything other than its own full name and address (City & State). To do so shall cause the bid to be rejected. In addition, the failure to produce a completed subcontractor list with the bid submittal shall cause the bid to be rejected. If you have more than three (3) third-tier contractors to report in any subcontractor category, print out additional page(s) containing the appropriate category, complete the rest of your list of third-tier contractors for that category, notate the addition in parentheses as (CONTINUATION) next to the subcontractor category and an asterisk (*) next to any additional third-tier contractors, and submit it with your bid.

Subcontractor Category

Subcontractor

Address (City & State)

**Subcontractors tax-payer ID #
or Delaware Business license #**

1.

A.

B.

C.

2.

A.

B.

C.

NOT FOR
BIDDING
PURPOSES

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

BID FORM (Continued)

3.

A.

B.

C.

NOT FOR

4.

A.

B.

C.

BIDDING

5.

A.

B.

C.

PURPOSES

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

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 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: _____

PHONE NUMBER: _____

TELEPHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____ NOTARY PUBLIC _____.

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

**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 site, in accordance with the regulations.

Contractor/Supplier Name: _____

Contractor/Supplier Address: _____

Authorized Representative (type or print): _____

Authorized Representative (signature): _____

Title: _____

Subscribed before me on _____ day of _____, 2008

Commission Expires _____ NOTARY PUBLIC _____

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

**Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004**

**AFFIDAVIT
OF
CONTRACTOR QUALIFICATIONS**

We hereby certify that we will abide by the contractor's qualifications outlined in the construction bid specifications for the duration of the contract term.

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b.3 of the Delaware Code, after a contract has been awarded the successful bidder shall not substitute another subcontractor whose name was submitted on the Subcontractor Form except for the reasons in the statute and not with the consent of the awarding authority. The list of subcontractors on the list will be subject to the successful bidder to the liabilities as outlined in the General Requirements Section 2 of the contract.

Contractor Name: _____

Contractor Address: _____

Authorized Representative (Type or print): _____

Authorized Representative (Signature): _____

Title: _____

Subscribed before me this _____ of _____, 20____

Commissionaires _____ NOTARY PUBLIC _____

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

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

BID BOND

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

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 hereby and firm to the sum of _____
dollars (_____)), of _____ percent not exceed _____

dollars (\$_____)
of amount of _____ in Contract No. _____, to be paid to the State for use and

benefit of _____ (insert State agency name) for which payment
well and truly be made to 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 entered into the _____ (insert State name) a

certain proposal to enter into the contract for furnishing of certain material and/or service within the
State, shall be awarded the Contract, and said **Principal** shall well and truly enter into and execute this

Contract may be required by 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 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_____)

SEAL AND DELIVERED IN THE
Presence of _____

PURPOSES

Corporate
Seal

By: _____
Authorized Signature

Attest _____

Title

Name of Surety

Witness: _____

By: _____

Title



AIA Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

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

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

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

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

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

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

The parties should complete A101 Exhibit A, Insurance and Bonds, contemporaneously with this agreement.

AIA Document A101®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

NOT FOR

BIDDING

PURPOSES

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

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

EXHIBIT A SURETY AND BOND

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties to and supersedes all prior negotiations, representations or agreements, either written or oral. Any amendment to the Contract Documents, or any Modification, shall bear the heading "Article 1."

ARTICLE 2 THE WORK OF THIS CONTRACT

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

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

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

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.

Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

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

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

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

- Not later than () calendar days from the date of commencement of the Work.

By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 All alternates of any kind included in the Contract Sum:

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

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

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

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

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

§ 4.4 Unit prices, if any:
(Identify each item, state the unit price and quantity limitations, if any, which the unit price will be applicable to.)

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

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

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

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

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the _____ day of a _____ month, the Owner shall make payment of the amount certified to the Contractor not later than the _____ day of the month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than _____ () days after the Architect receives the Application for Payment.

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

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

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

§ 5.1.6 In addition to AIA Document A201™, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

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

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

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

1. The aggregate of all amounts previously paid by the Owner;
2. The amount of any Work that remains uncompleted for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017; and
3. Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
4. For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201-2017; and
5. Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

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

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor an additional amount in accordance with Article 9 of AIA Document A201-2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, including any unpaid amounts, shall be made by the Owner to the Contractor when

the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 15 of AIA Document A201-2017 and any other requirements, if any, which extend beyond final payment and

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

§ 5.2.3 Interest
Payment due and unpaid to the Contractor shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the project is located.
(Insert rate of interest agreed upon, if any.)

_____ % _____

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201-2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

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

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

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

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contractor may terminate the Contract by the Owner or the Contractor as provided in Article 7 of AIA Document A201–2017.

§ 7.1 If the Contract is terminated for the Owner's convenience in accordance with Article 7.4 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 7.4 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where a reference is made in this Contract to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

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

§ 8.3 The Contractor's representative:

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

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

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

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

§ 8.7 Other provisions:

ARTICLE 9 LIST OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is composed of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of E203-2013 incorporated into this Agreement.)

Number	Title	Date
--------	-------	------

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

.7 Addenda, if any:

Number	Date	Pages
--------	------	-------

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

.8 Other Exhibits:

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

- AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

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

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.9 Other documents, if any, listed below:

(List here any additional documents that are intended to be part of the Contract Documents. AIA Document A191™ (2017) provides that the advertisement or invitation to bid, instructions to bidders, supplemental conditions, the Contractor's bid or proposal, provisions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in participation of receiving or preparing a proposal are not part of the Contract Documents unless enumerated in this Agreement. Any such documents not listed here only if intended to be part of the Contract Documents.)

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

OWNER Signature

CONTRACTOR Signature

(Printed name and title)

(Printed name and title)

BIDDING
PURPOSES



AIA Document A101® – 2017 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

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

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

This document is intended to be used in conjunction with AIA Document A201-2017, General Conditions of the Contract for Construction, Article 11 of AIA Document A201-2017 contains additional insurance provisions.

THE OWNER:
(Name, legal status and address)

THE CONTRACTOR:
(Name, legal status and address)

TABLE OF ARTICLES
A.1 GENERAL CONDITIONS
A.2 OWNER'S INSURANCE
A.3 CONTRACTOR'S INSURANCE AND BONDS
A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL CONDITIONS
The Owner and Contractor shall purchase and maintain insurance, and provide bonds as set forth in this Exhibit. As used in this Exhibit, the term "General Conditions" refers to AIA Document A201-2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's

property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

(Indicate below the cause of loss and any applicable sub-limit.)

Cause of Loss	Sub-Limit
---------------	-----------

§ A.2.3.1.2 Specific Required Coverages. The insurance required by Section A.2.3.1 shall provide coverage for loss or damage to the Work and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable local requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit
----------	-----------

§ A.2.3.1.3 Unless the parties agree otherwise upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1, or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

A.2.3.2 Occupancy Use prior to Substantial Completion. The Owner's occupancy or use of any portion or partial completion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have assented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

§ A.2.4.2 Ordinance or Law Insurance, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

§ A.2.4.3 Expediting Cost Insurance, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

§ A.2.4.4 Extra Expense Insurance, to provide reimbursement for the reasonable and necessary excess costs incurred during the period of restoration in repair of the damaged property to a higher and above the total cost that would normally have been incurred during the same period of time had no loss or damage occurred.

§ A.2.4.5 Civil Authority Insurance, for losses or costs arising from an order of a civil authority prohibiting access to the Project, or such orders that restrict restoration of physical damage covered under the required property insurance.

§ A.2.4.6 Ingress and Egress Insurance, for losses or costs due to the necessary interruption of the Owner's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

§ A.2.4.7 Soft Cost Insurance, to reimburse the Owner for costs due to the delay in completion of the Work, and for physical damage covered by the required property insurance, including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, bonding permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

§ A.2.5.1 Cyber Security Insurance for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information.
(Indicate applicable limits of coverage or other conditions in the fill point below.)

- § A.2.5.2 Other Insurance**
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage during the entire period of Section 3.18 and Section 3.19. The certificates will show the Owner and any additional insureds on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insurance Retention. The Contractor shall disclose to the Owner any deductible, self-insurance retention, or applicable co-insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contract Period; and (2) the Contractor as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which the Contractor is occurring during completed operations. The additional insured coverage shall be primary and non-contributory to all of the Owner's general liability insurance policies and shall apply to the entire Contract Period and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 11 07 04, and, with respect to the Architect and Architect's consultants, CG 20 32 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

The Contractor shall maintain the required insurance until the expiration of the period for correction of errors set forth in Section 12.1 of the General Conditions, unless a different duration is specified below. (The Contractor is required to maintain insurance for a duration other than the duration of the period for correction of Work to complete the correction.)

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than _____ (\$____) each occurrence, _____ (\$____) general aggregate, and _____ (\$____) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to, or destruction of, tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surface work in coatings or treatments on
- .10 Claims related to earth subsidence or movement, where the work involves such hazards.
- .11 Claims related to explosion, collapse, and underground loads, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicle owned, and non-owned vehicle used, by the Contractor, with policy limits of not less than _____ (\$) per accident, for bodily injury, death of a person and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary excess or umbrella liability insurance and such primary and excess or umbrella insurance policies. It is the Contractor's responsibility to ensure that such coverages are not less than the coverages required under Section A.3.2.2. A.3.2.2 and no event shall allow excess or umbrella liability insurance to provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than _____ (\$) each accident, _____ (\$) each employee, and _____ (\$) policy limit.

§ A.3.2.7 Lines Act and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves loading or unloading cargo from work or non-navigable waterways, including vessels and

§ A.3.2.8 If the Contractor requires to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services. The policy limits shall be _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

NOT FOR BIDDING

§ A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section 3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except in the amount required by Section 12.2.3 of the General Conditions. The Contractor shall comply with all obligations of the Owner under Section A.2.3, except to the extent provided below. The Contractor shall disclose the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below.

(Where the Contractor's obligation to provide property insurance differs from the Owner's obligation as described under Section A.2.3, indicate such difference in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling the loss with the insurer and acting as trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

§ A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than _____ (\$ _____) per claim and _____ (\$ _____) in the aggregate for work within _____ feet of the property.

§ A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than _____ (\$ _____) per claim and _____ (\$ _____) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

§ A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

§ A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

§ A.3.3.2.6 Other Insurance
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	
Performance Bond	

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

**NOT FOR
BIDDING
PURPOSES**

**NOT FOR
BIDDING
PURPOSES**

SECTION 00 52 13

**STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR
A101-2017**

The contract to be utilized on this project shall be the Standard Form of Agreement Between Owner and Contractor AIA Document A101-2017, as modified by the Owner's amendment to the A101, and including AIA Document A101- 2017 Exhibit A, as well as Supplements to A101-2017 and Exhibit A and the State of Delaware's General Requirements.

**NOT FOR
BIDDING
PURPOSES**

SECTION 00 54 13

**SUPPLEMENT TO AGREEMENT BETWEEN OWNER AND CONTRACTOR
A101-2017**

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2017. 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.

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

NOT FOR

The parties hereby agree and reaffirm that the AIA Document A101-2017 "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 by A201-2017 General Conditions for Construction and amendments therein ("Contract Documents"). At times Owner and Contractor shall be collectively referred to as "Parties".

The parties expressly agree (hereinafter "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:

PURPOSES

Contractor represents and warrants that he has not employed or retained any company or person, other than 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 any other 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. If the Contractor fails to complete the work within the time specified, the Contractor shall pay liquidated damages to the Owner in the amount of \$ _____ for each calendar day of delay until the work is completed or accepted. If the Owner terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to all sums and remedies available to Owner upon termination for cause.
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 work) which 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 Delaware Minimum 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 of any amount. The amounts due shall be paid in time payment, computed at a rate not less than the prevailing wages schedule 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 Contractor shall be responsible for all costs of any change order not provided for in the change order, then the cost of the change order shall be the Contractor's cost, including wages, materials other than wages, taxes, fuel, equipment rental, insurance and subcontractor's contribution to the additional activity plus a reasonable surcharge or overhead and profit not to exceed _____%.
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 27 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, operation and repair to the date of the release and who would be entitled to the use to file mechanics' liens claim 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. § 10.3.3 is hereby deleted. The parties reserve and intend to have available at law or equity any dispute resolution in accordance with §6.1;
13. § 6.1 is hereby deleted and there shall be no termination Fee payable to Contractor. Any reference to a Termination Fee in §14.1 of the A201-2017 is also deleted.
14. Any and all references to attorney's fees in §10.3.3 of the A201-2017 is deleted.

15. Exhibit A Insurance Bonds is deleted. Not as per the Supplement to the A101-2017. In compliance with the execution of the contract, Contractor shall also execute a bond sufficient to the benefit of Owner. The contractor shall be 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 used by the Contractor 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. Contractor shall obtain all insurance required by Owner and provide proof thereof prior to execution.;

16. 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.

17. Owner may, when it considers its interests so require, cause judgment to be entered on the bond. All sums received through confession of judgment shall be paid for the benefit of the Owner to the Secretary of Finance;

18. 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;

19. Contractor shall submit reports to Owner not less frequently than monthly covering the general progress of the job and describing any problem or failure or contributing to it.

20. During performance of this contract, 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. Contractor agrees to ensure that all positions to be filled are open to all qualified persons and that employees are treated equally 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.

21. 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.

IN WITNESS WHEREOF, the parties, through their acknowledged and duly authorized agents set forth below, have set their hand and seal on this _____ day of _____, 201__.

Delaware Technical and Community College

Mark Board, President
(Seal)
Contractor)

By: (Seal)

**NOT FOR
BIDDING
PURPOSES**

SECTION 00 54 14

SUPPLEMENT TO A101-2017 – EXHIBIT A - INSURANCE & BONDS

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor," AIA Document A101-2017 Exhibit A Insurance and Bonds. 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 A.2 OWNER'S INSURANCE

A.2.1 General

Delete paragraph A.2.1 in its entirety.

A.2.2 Liability Insurance

Delete paragraph A.2.2 in its entirety, except in the case of school projects this paragraph shall remain.

A.2.3 Required Property Insurance

Delete paragraph A.2.3 in its entirety.

A.2.4 Optional Extended Property Insurance

Delete paragraph A.2.4 in its entirety.

A.2.5 Other Optional Insurance

Delete paragraph A.2.5 in its entirety.

ARTICLE A.3 CONTRACTORS INSURANCE AND BONDS

A.3.1.1 Strike the last sentence of the paragraph

A.3.1.3 Additional Insured Operations

Strike the first sentence after coverage to include (1) and (1) the O

Strike the remainder of the first sentence beginning at the semicolon "; and (2) the Owner" through the end of the sentence.

Delete the second sentence in its entirety.

- A.3.2.2.1 Insert "\$1,000,000.00" in the blank for each occurrence.
Insert "\$3,000,000.00" in the blank for general aggregate.
Insert "\$3,000,000.00" in the blank for aggregate for products-completed operations hazard.

A.3.2.3 Insert "\$1,000,000.00" in the blank for per accident.

A.3.2.6 Insert "\$500,000.00" in the blank for each accident.
Insert "\$500,000.00" in the blank for each employee.
Insert "\$500,000.00" in the blank for policy limit.

A.3.2.8 Insert "\$1,000,000.00" in the blank for per claim.
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.9 Insert "\$1,000,000.00" in the blank for per claim.
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.10 Insert "\$2,000,000.00" in the blank for per claim.
Insert "\$4,000,000.00" in the blank for in the aggregate.

A.3.2.11 Strike in its entirety.

A.3.2.12 Strike in its entirety.

A.3.2.13 Delete paragraph 2.1 in

A.3.2.14 Strike in its entirety.

A.3.2.15 Insert "\$1,000,000.00" in the blank for per claim.
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.4 Insert the actual contract price in both the Payment Bond and the Performance Bond Penal Sum blanks. It must be 100% of the contract price.

The last entered section shall be with Payment and Performance shall be in the standard form issued by Delaware Office of Management and Budget

END SECTION

NOT FOR
BIDDING
PURPOSES

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

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 _____ to Owner, which payment well and truly to be made, we do bind ourselves, our assigns and heirs, executors, administrators, successors and assigns, jointly and severally, for and to 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 **Owner** Contract No. _____ dated the _____ day of _____, 20__ (the “Contract”), which Contract is incorporated herein by reference, shall not fully provide and fulfill all terms, conditions and bonds and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as amended by the Contract) or any changes or modifications hereinafter made 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 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 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 date first above written.

NOT FOR

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

By: _____ (SEAL)
Name: _____
Title: _____
(Corporate Seal)

BIDDING

SURETY

Name: _____

PURPOSES

Witness Attest Address: _____

By: _____ (SEAL)
Name: _____
Title: _____
(Corporate Seal)

Delaware Technical Community College
Owens Campus
Contract #: DTCC: C9004020004

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**”) held a _____ bound unto _____ **Owner** (ins. **State Agency name** in the name of _____ (\$ _____), to be paid _____ of which payment was and they to be made, we do bind ourselves, our assigns, heirs, executors, administrators, successors and assigns, joint and several, 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** the 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 material 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 **Principal** shall also indemnify and hold **Owner** harmless from all damages and expenses incurred by **Owner** or by reason of the performance of the Contract and/or as loss as provided by the Contract; and this obligation shall be otherwise in full force and effect.

Surety, for the receipt of, for itself and its successors, assigns, heirs, administrators, executors, 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 Agent: Address: _____

By: _____ (SEAL)
Name: _____
Title: _____
(Corporate Seal)

Name: _____
Witness Attest Address: _____
Name: _____ (SEAL)
Title: _____
(Corporate Seal)

SECTION 00 62 76

APPLICATION AND CERTIFICATE FOR PAYMENT FORMS

**NOT FOR
BIDDING
PURPOSES**

APPLICATION AND CERTIFICATE FOR PAYMENT

AIA DOCUMENT G702

TO OWNER:

John G. Johnson Construction
1284 Riverbed Street
Cleveland, OH 44113

PROJECT:

APPLICATION NUMBER: _____

PERIOD TO: _____

PROJECT NO: _____

CONTRACT DATE: _____

Distribution to:

- OWNER
- CONSTRUCTION MANAGER
- ARCHITECT
- CONTRACTOR

FROM

CONTRACTOR:

CONTRACTOR'S APPLICATION FOR PAYMENT

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

1. **ORIGINAL CONTRACT SUM** \$0.00
2. **Net Change By Change Orders**..... \$0.00
3. **CONTRACT SUM TO DATE** (Line 1+2)..... \$ -
4. **TOTAL COMPLETED & STORED TO DATE**..... \$ 0.00
(Column G on G703)
5. **RETAINAGE:**
 - a. 10% of Completed Work \$0.00
(Columns D & E on G703)
 - b. 10% of Stored Material \$0.00
(Column F on G703)

Total Retainage (Line 5a + 5b or Total in Column I of G703) \$0.00
6. **TOTAL EARNED LESS RETAINAGE**..... \$0.00
(Line 4 less Line 5 Total)
7. **LESS PREVIOUS CERTIFICATES FOR PAYMENT**..... \$0.00
(Line 6 from prior Certificate)
8. **CURRENT PAYMENT DUE** \$0.00
9. **BALANCE TO FINISH, INCLUDING RETAINAGE**
(Line 3 less Line 6) \$ -

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

CONTRACTOR: _____
By: _____ DATE _____
State of: _____ County of: _____
I, _____, do hereby certify and swear before me that _____ is the duly authorized _____ of the Contractor named above.
My Commission Expires: _____

CERTIFICATE FOR PAYMENT

In compliance with the Contract Documents and on the basis of the information and data comprising the application, the Construction Manager certifies that to the best of his knowledge, information and belief the Work has been completed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... \$ -
(Attach explanation if amount certified differs from the amount applied for. Initial all figures on this Application and on the Continuation Sheet that changed to conform to the amount certified.)
CONSTRUCTION MGR:
By: _____ Date: _____

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

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	\$0.00
Total Approved this Month	\$0.00	\$0.00
TOTALS	\$0.00	\$0.00
NET CHANGES by Change Order		\$0.00

CONTINUATION SHEET

AIA Document G702, APPLICATION AND CERTIFICATE FOR PAYMENT, containing Contractor's signed Certification is attached.

APPLICATION NO: 0
 APPLICATION DATE: 10/31/21
 PERIOD TO: 01/00/00
 ARCHITECT'S PROJECT NO: 0

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D+E+F)	H % (G/C)	I BALANCE TO FINISH (C-G)	J RETAINAGE
			FROM PREVIOUS APPLICATION (D+E)	THIS PERIOD					
100		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
101		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
102		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
103		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
104		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
105		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
106		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
107		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
108		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
109		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
110		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
111		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
112		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
113		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
114		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
115		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
116		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
117		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
118		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
119		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
120		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
121		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
122		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00
TOTALS		\$	\$	\$0.00	\$0.00	\$0.00	0.00	\$0.00	\$0.00

NOT FOR BIDDING PURPOSES



AIA Document A201® – 2017

General Conditions of the Contract for Construction

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

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

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

For guidance in modifying this document, see the AIA Document A201™, Guide for Supplemental Conditions.

NOT FOR

TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 PROJECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES TO 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
- 15 CLAIMS AND DISPUTES

BIDDING

PURPOSES

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents do not create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any person or entities other than the Owner and the Contractor. The Architect, however, shall be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Contractor's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor under the Contract Documents. The Work may constitute the whole or part of a project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may constitute the whole or a part and which may include construction by the Owner and by separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for material, equipment, systems, standards and workmanship for the Work and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression, of how known or developed, tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. 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 only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the event of a conflict between the Contract Documents, frequently omitted modifying words such as "and" and "any" in articles such as "and" and "any" shall not control the fact that a modifier or an article is absent from a statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Instruments of Service, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet regulatory requirements for other projects in connection with the Project is not construed as publication in derogation of the Architect's or Architect's consultant's reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Section 1.7 and 1.8, solely and exclusively for the execution of the Work. All copies shall bear the authorization stamp and notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notices

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed, and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if the method of electronic transmission is set forth in the agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™-2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building

information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work, the Contractor shall request in writing that the Owner provide to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fifteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because of a change in the Work materially changing the Contract Sum under (3) above, the Contractor may immediately stop that portion of the Work affected by such change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable cost of delay and plus interest provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has provided information as required in Section 2.2, the Contractor shall keep the information confidential and shall not disclose it to any other persons. However, the Contractor may disclose confidential information under section (7) defined in the Agreement to the Owner, when disclosure is required by law, including subpoena or other process of competent legal process issued by a court or government entity, or by court or arbitrator's order. The Contractor may also disclose "confidential" information to its employees, consultants, subcontractors, their employees, sub-subcontractors, and others who need to know the information for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other entity, or the expense of the Contractor as provided by Section 11.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue performance of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiency. In addition, the Contractor shall be liable for the Owner's cost of and compensation for the Architect's additional services necessary by such default, neglect or failure. In current and future payments due the Contractor to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the action of the Owner or the Architect, or the amounts charged to the Owner, the Contractor may file a Claim pursuant to Article 11.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" shall mean the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall carry out the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to carry out the Work by the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations of lawful public authorities.

§ 3.3 Construction Means, Methods, Techniques, Sequences, and Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures used for completing all portions of the Work under the Contract. If the Contract Documents require specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the complete construction to express the Architect's objects of the Contract. If the Architect approves an alternative, the Contractor shall perform the Work using the alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible for the safety of the Work and the safety of the Contractor, its Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper conformance with the Contract Documents.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for proper execution and completion of the Work, unless otherwise specifically permitted in the Contract Documents to be incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work known to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters on a site the subsurface or otherwise concealed conditions that differ materially from those indicated in the Contract Documents or unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and to evaluate them as soon as practicable after first observation of the conditions. The Architect shall investigate the conditions and, if the Architect determines that the conditions differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and the Contractor, stating the reasons therefor. The Contractor shall accept the Architect's determination and shall not submit a Claim as provided in Article 15.

§ 3.7.5 In the course of performance of the Contract, the Contractor shall not disturb any human remains or recognize the existence of burial markers, archaeological sites or wrecks not indicated in the Contract Documents. If the Contractor shall immediately suspend all operations that would affect them and shall notify the Owner and the Architect. Upon receipt of notification, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

1. allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
2. Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

- 3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not reasonably be withheld or delayed.

§ 3.10 Contractor Construction Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of portions of the Work as scheduled. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed the limits set forth in the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary, maintain current submittal schedules and shall submit such schedules for Architect approval. The Architect shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the master schedule submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Project Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field conditions related thereto, and (3) checked and approved the information contained in such submittals against the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviations in writing, submitted (1) the Architect with a written approval of the specific deviation as a minor change in the Work, or (2) Change Order or Construction Change Directive have been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct attention to, and respond to, revisions or resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work. Unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable laws.

§ 3.12.10.1 Professional design services or certifications by a design professional, or systems, components, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the

time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold consent to the Owner or Separate Contractor consent to the Owner or other for the Work.

§ 3.15 Clean Up

§ 3.15.1 The Contractor shall keep premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be reimbursed by the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to Work in preparation of program wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturer is required by the Contract Documents where a right violation is contained in drawings, specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered, or made known to, the Contractor, the Contractor shall be responsible for such loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work is being performed in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, and will not be responsible for, actions or omissions of the Contractor, Subcontractors, suppliers, or their agents or employees, or any other persons or entities performing portions of the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies of the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or control and will not be responsible for actions or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with the Contractor shall be through the Contractor. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's observations and the Contractor's Application for Payment, the Architect will review and certify the amount due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under

Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents in response to written requests of either the Owner or Contractor. The Architect's responses to such requests will be made in writing within any time limits specified or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent and a reasonably inferable meaning from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions regarding the relative effort to be expended will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's responses to such requests will be made in writing within any time limits specified or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental drawings and specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A subcontractor is a person or entity in direct contact with the Contractor to perform a portion of the Work at the site. The term "subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include separate contracts or subcontracts of a Separate Contract.

§ 5.1.2 A sub-subcontractor is a person or entity who has a direct contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 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. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the Contractor is not prejudiced by such rights, and shall allow the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor by the Contract Documents has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors. The Contractor shall make available to each proposed subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Assignment of Subcontract

§ 5.4.1 Every subcontract agreement for a portion of the Work assigned by the Contractor to the Owner, provided that the subcontract agreement is effective only as to termination of the Contract by the Owner for cause pursuant to Section 14, and only for those subcontract agreements that the Owner accepts, shall be subject to the terms of the Contract Documents and shall be subject to the Contractor's right to require the Subcontractor to provide a bond for the Work assigned to the Subcontractor.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the work has been suspended for more than 30 days, the subcontractor's compensation shall be suitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. When the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 Part of the Contractor's Work shall be performed by the Contractor's subcontractors. The Contractor shall, prior to proceeding with the Work, promptly notify the Architect of any apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would not be apparent to the Contractor upon execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner or Separate Contractor's completed or partially completed construction is proper and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delay, early time, or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of the Separate Contractor's delay, improperly timed activities, or damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or property of the Owner. The Contractor shall provide the Architect with Section 3.14.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right of Clear

If a dispute arises among the Contractor, Separate Contractor, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from materials and debris, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation of the change; or
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined on a basis agreed upon by the parties and mutually accepted, a fixed percentage of the original contract fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, an itemized accounting together with appropriate supporting data of the change shall be provided in the Contract Documents for the purpose of this Section 7.3.4 shall be limited to the following: cost of labor, including applicable payroll taxes and benefits related to the change; cost of materials, including transportation, when applicable; cost of machinery and equipment, including cost of transportation, when applicable; cost of consumables; cost of rental of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; and cost of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change. Cost of supervision and field office personnel directly attributable to the change.

- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect, the Contractor shall be deemed to have accepted the change and shall be bound by any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definition

§ 8.1.1 Unless otherwise provided, the Contract Time is the period of time, including authorized adjustments, allowed in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion shall be the date established by the Architect in accordance with Section 8.8.

§ 8.1.4 The term "delay" as used in the Contract Documents shall mean any delay, unless otherwise specifically defined.

§ 8.2 Provisions of Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of the Agreement, or be furnished with the Contract Documents by the Owner prior to the effective date of the Agreement.

§ 8.2.3 The Contractor shall proceed expeditiously with the Work and shall complete the Work by the Substantial Completion date of the Contract Time.

§ 8.3 Delay and Extension of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date of each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect requires, such as copies of requisitions, and releases of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for payment shall not include requests for payment for portions of the Work for which the Contractor has intended to pay Subcontractors or suppliers, or for Work to be performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payment shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment. The Contractor shall protect the Owner's interest, and shall provide the Owner with the applicable storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants its title to all materials covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon completion of an Application for Payment for Work for which certification for Payment has been previously issued, the Contractor's payment shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may refuse to issue a Certificate for Payment if the Architect determines that the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including losses resulting from acts and omissions described in Section 9.2.2, because of

1. defective Work not remedied;
2. unpaid claims for or reasonable evidence indicating probable filing of suit against the Contractor, unless security acceptable to the Owner is provided by the Contractor;
3. failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
5. damage to the Owner or a Separate Contractor;

reasonable evidence that the Work was not completed within the Contract Time and the unpaid balance was not adequate to cover actual and required damages for the anticipated delay or the Contractor's failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding certification for payment under Section 9.5.1, in whole or in part, it may submit a claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Architect may require the Contractor to jointly check the Contractor's payments to any Subcontractor or supplier who the Contractor is required to make payments for Work performed for or material or equipment suitably covered by the Owner's payments. The Contractor shall notify the Architect and the Contractor shall deduct such payment from the next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage, expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond in the full penal sum of the Contract Sum or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's application for payment, the Owner shall notify the Contractor within seven days after the date established in the Contract Documents of the amount certified to the Contractor and the amount of the Contractor's unpaid obligations. The Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contractor shall be deemed to have properly applied for the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of out-of-pocket delay and start-up plus interest as provided in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work or designated portion thereof which the Owner has agreed to separate is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 In addition to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise provided, partial occupancy or use of a portion or portion of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of the application for final payment, the Architect shall promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contractor is paid in full, the Architect will promptly issue a final Certificate of Final Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's own view and inspection, the Work has been completed in accordance with the Contract Documents and that the entire balance found due to the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate of Final Payment shall constitute further representation that the conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or Contractor's payment might be required or encumbered has been paid or held by the Owner) have been paid or otherwise satisfied; (2) a certificate indicating that insurance required by the Contract Documents to remain in force after final payment is of full effect; (3) written consent that the Contractor knows of no reason that the insurance will not be available to cover the period required by the Contract Documents; (4) consent of surety, if any, to final payment; (5) documentation of any special warranties, such as manufacturers' warranties, on the Subcontractor's part; and (6) if required by the Owner, the Contractor's establishment of satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not

constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.1.1 Safety of Persons and Property

§ 10.1.1.1 The Contractor shall take reasonable precautions for safety of persons and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 Work materials and equipment to be incorporated therein, materials in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, and shall be responsible for, the following safety precautions and programs in accordance with the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use of Contractor's equipment involves hazardous materials or equipment, the Contractor shall exercise utmost care and safety of such activities under supervision of a properly qualified person.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance provided by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3, and in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish information to the Contractor and Architect the names and qualifications of persons or entities who are to perform the testing the presence or absence of the material or substance or who are to perform the work of removal or safe containment of the material or substance. The Contractor and the Architect will properly notify the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 The full extent permitted by law the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, agents and employees of each of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area in fact that a material or substance presents a risk of bodily injury or death as described in 10.3.1 and has not been rendered harmless, provided that such claim, damage, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall remain responsible for detection, identification, and removal of hazardous materials or substances brought to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent that the Contractor is fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost of (1) the Contractor's (1) detection of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner with immediate effect upon actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 The Owner shall purchase required Property Insurance. If the Owner fails to purchase and maintain the required property insurance with all of the coverages and in the amount described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may suspend performance of the Work and may procure insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by an appropriate Change Order. The Owner shall provide notice when the Owner fails to purchase and maintain the required insurance. The Contractor is not liable for the failure of the Owner to purchase and maintain the required insurance. The Owner shall reimburse the Contractor for all reasonable costs and damages attributable to the failure to provide coverage.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The

Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's expense, may maintain insurance that will cover the Owner's losses of use of the Owner's property for the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property due to fire or other causes of loss covered by this insurance.

§ 11.5 Adjustments and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make similar payments to their consultants and subcontractors in a similar manner.

§ 11.5.2 If the Contractor objects to an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement within the purpose of allocation of the insurance proceeds. The Contractor shall file a written receipt of notice of objection to the proposed settlement of all or part of the proceeds. If the Contractor does not object, the Owner shall settle and the Contractor shall be bound by the settlement and allocation. Upon receipt of the settlement, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Contractor may proceed to settle the insured loss and dispute the amount of the proceeds or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Contractor shall issue a Construction Change Directive for reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the

Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.2.4 The Contractor shall be responsible for the cost of correction of portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 This section 12.2 shall not be construed to establish a period of limitation with respect to other obligations of the Contractor under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relation to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so in writing, which shall constitute a written acceptance of such condition. In such case, the Contract Sum shall be reduced by the appropriate and equitable amount, which adjustment shall be effected whether or not final payment has been made.

ARTICLE 15 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Contractor shall arrange and pay for inspections and approvals of building code applications applicable to laws and regulations so required.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, direct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If the Contractor fails to comply with the requirements established by Sections 13.4.1 and 13.4.2, the Contractor shall be responsible for the cost of such failure, including the cost of retest procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 All certificates of test results, inspection reports, and approvals shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspection conducted pursuant to the Contract Documents shall be made promptly to avoid any reasonable delay to the Work.

§ 13.5 Interest

Payments not yet paid under the Contract Documents shall bear interest from the date of payment to the date the parties 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.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Contractor - Cause

- § 14.2.1 The Owner may terminate the Contract if the Contractor:
- .1 repeatedly refuses or fails to supply enough properly skilled workers or properly equipped work force;
 - .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the subcontractors or suppliers;
 - .3 repeatedly violates applicable laws, statutes, ordinances, codes, regulations, or law orders of a public authority; or
 - .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists for such termination, the Contractor may, at its expense, pursue any and all rights or remedies available to the Contractor under the Contract Documents, if any, and terminate the employment of the Contractor's employees, subject to any prior right of the surety:

- Execute the Contractor from the site and take possession of all materials, equipment, tools, construction equipment and machinery thereon needed for the Contract Documents, and assign all contracts pursuant to Section 14.2.1.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for any of the reasons stated in Section 14.2.1, the Contractor shall be entitled to receive further payment until the Work is finished.

§ 14.2.4 The unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, shall be paid to the Contractor. If such costs exceed the Contract Sum, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and contentions between the Owner and Contractor arising out of or relating to the Contract, the responsibility to substantial items, all rest with the party making the Claim. This Section 15.1 does not require the Owner to file a Claim in order to impose or defend damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the applicable resolution method selected in the Agreement and with the period specified in applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all rights to a cause of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Whether the Owner or Contractor, the condition giving rise to a Claim must be discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor where the condition giving rise to the Claim is not discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

1. damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
2. damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude a claimant from liquidated damages, when applicable in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required within ten days of the receipt of a Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation. Binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not resolve disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the Claim. If the Initial Decision Maker concludes that, in the exercise of the Initial Decision Maker's sole discretion, it would be appropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating a Claim, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from a person with special knowledge or expertise who may assist the Initial Decision Maker in making a decision. The Initial Decision Maker may, at the Owner's expense, hire a professional to assist in the evaluation of the Claim.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator to be used to resolve the dispute.

§ 15.3.3 The parties may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 30 days after mediation has been concluded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 30 days after receipt thereof, then both parties waive their rights to pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 The parties have elected arbitration as the method of binding dispute resolution of the Agreement, any Claim subject to but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to the arbitrator or arbitrators the same right of joinder and consolidation as those of the arbitrator under the Agreement.

NOT FOR
BIDDING
PURPOSES

SECTION 00 72 13

**GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION
A201 - 2017**

The General Conditions of this Contract are as stated in the ConsensusDocs 310 Contract Form published by the American Institute of Architects (AIA) A201 (2017) Edition, entitled General Conditions of the Contract for Construction, as revised by the Supplemental General Conditions and is part of this project manual as if hereinafter written in full.

**NOT FOR
BIDDING
PURPOSES**

SECTION 00 73 13

SUPPLEMENTARY GENERAL CONDITIONS A201-2017

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201-2017. 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

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PURPOSES

ARTICLE 1: GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

Strike the last sentence of Section 1.1.1 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 Section:

“1.1.1.1 In the event of conflict or discrepancies among the Contract Documents, the drawings prepared by the Architect or its Divisions or its representatives shall take precedence over all other documents.”

1.1.8 INITIAL DEFINITION OF WORK

Strike the last sentence of Section 1.1.8 in its entirety and add the following to the end of the remaining sentence:

“and certify termination of the Agreement under Section 14.2.2.”

1.2.1 CARRIER AND INITIALS IN THE CONTRACT DOCUMENTS

Insert “if possible” at the end of the second sentence.

Add the following Section:

“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.”

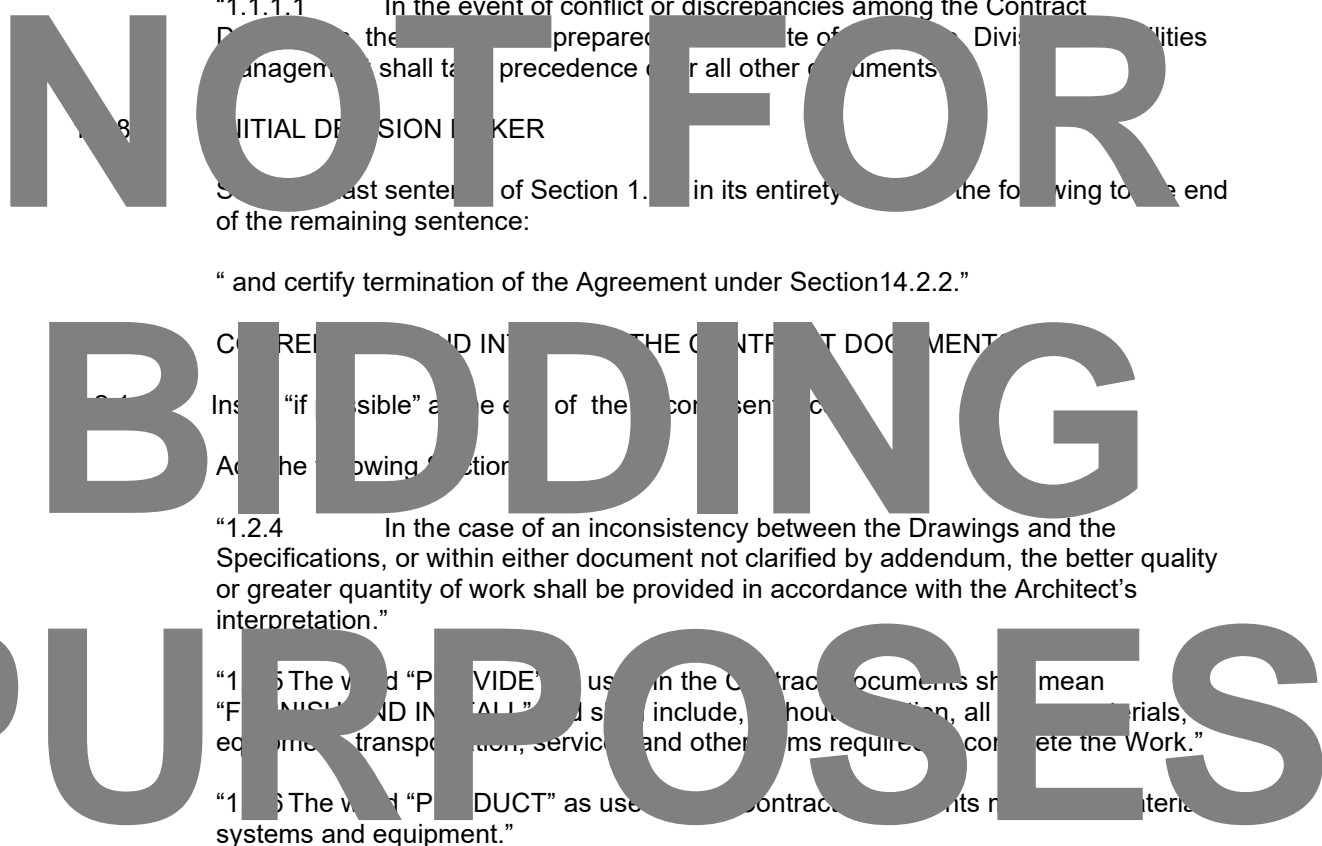
“1.2.5 The word “PRODUCE” as used in the Contract Documents shall mean “FURNISH AND INSTALL” and shall include, without limitation, all materials, equipment, transportation, services and other items required to complete the Work.”

“1.2.6 The word “PRODUCE” as used in the Contract Documents shall include materials, systems and equipment.”

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

Strike Section 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."

Strike Section 1.5.2 in its entirety.

1.7 DIGITAL DATA USE AND TRANSMISSION

Strike Section 1.7 in its entirety and replace with the following:

The parties shall agree upon protocols regarding transmission and use of instruments of service or other information or documentation in digital form.

1.8 BUILDING INFORMATION MODELS USE AND RELIANCE

Strike Section 1.8 in its entirety.

2.2: OWNER'S FINANCIAL COMMITMENTS

Strike Section 2.2 in its entirety.

2.3 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.3.3 Strike 2.3.3 in its entirety.

2.3.4 Add the following sentence to the end of paragraph 2.3.4:

"The Contractor, at their expense, shall bear the cost of accurately locating 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."

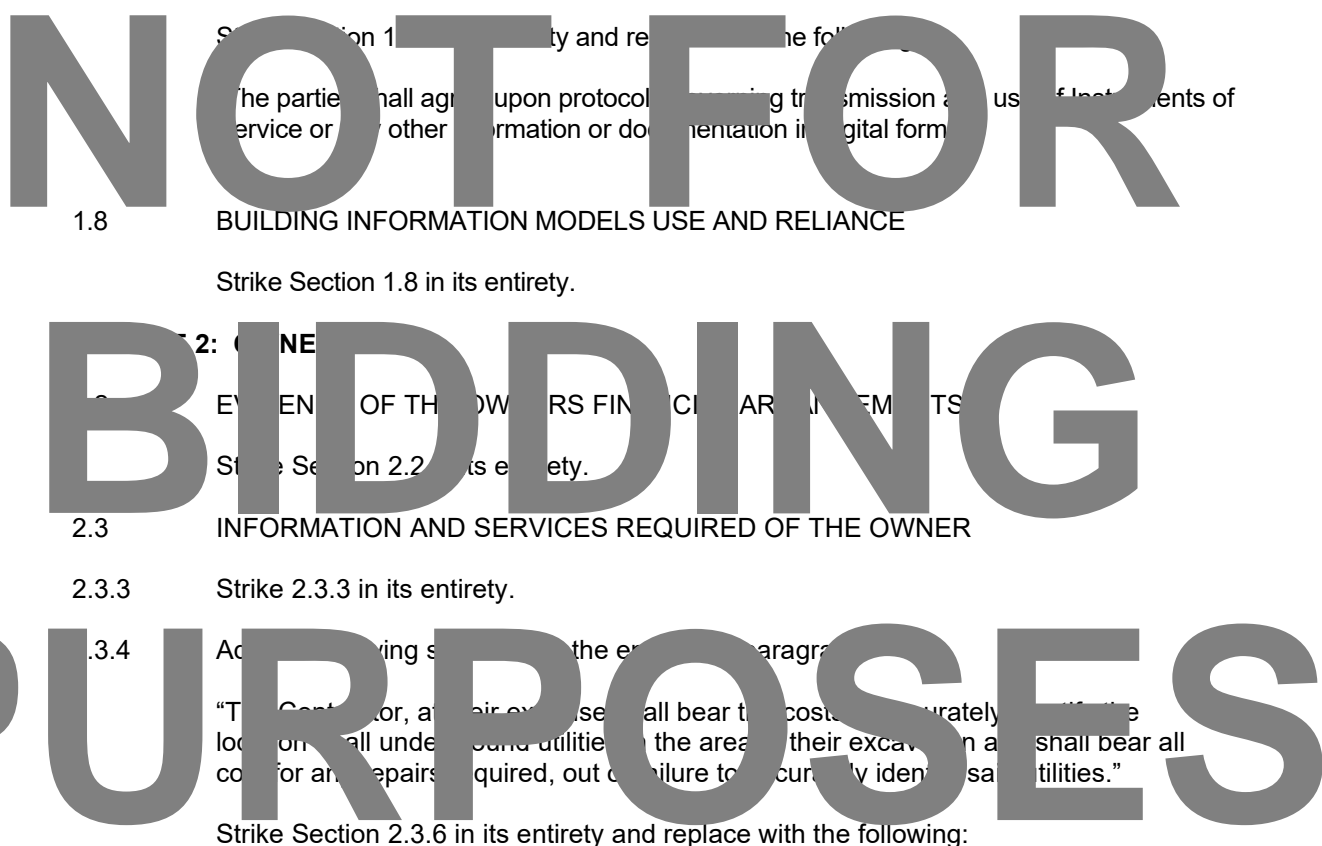
Strike Section 2.3.6 in its entirety and replace with the following:

"2.3.6 The Contractor shall be furnished free of charge (1) electronic set of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling."

2.5 OWNER'S RIGHT TO CARRY OUT THE WORK

Add ", except as outlined in Section 3.15" after the reference to "Article 15" at the end of the last sentence of the Section.

ARTICLE 3: CONTRACTOR



3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.2 Add "and Owner" after "report to the Architect" in the second sentence.

3.2.4 Strike "subject to Section 15.1.7" in the second sentence.

3.2.4 Strike the third sentence.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Sections:

"3.3.2.1 The Contractor shall immediately remove from the Work, whenever required to do so by the Owner, any material which is considered by the Architect to be incomplete or disposed of so disorderly, or for any reason not satisfactory to the Owner, and that person shall not remain employed on the Work without the consent of the Owner or the Architect."

"The Contractor must provide suitable storage facilities on the Site for the proper protection and safe storage of their materials, or as otherwise identified by the specifications. 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 during the execution of the Work, the Contractor shall be responsible for any damage to the building or contents thereof, and shall be held responsible for any repair, repainting or cleaning arising from such use."

3.4 LABOR AND MATERIALS

Add the Following Sections:

"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 necessary, to insure that the Work is correct, relative to the location, level, contours, planes and levels. Promptly notify the Architect & Owner of any defects or imperfections in preparatory Work which will in any way prevent satisfactory completion of its Work. Absence of such notification will be construed as an acceptance of preparatory Work and no claim of defects will 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 Sections:

"3.5.3 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 years after Acceptance by the Owner, and will maintain all items in perfect condition during the period of warranty."

"3.5.4 Defects appearing during the period of warranty 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 warranty will have elapsed."

"3.5.5 Upon notification by the Owner of a defect covered by the Contractor's warranty, the Contractor shall respond within 4 hours of the notification."

"3.5.6 In addition to the General Warranty there are other warranties required for certain items for different periods of time than the two years as above, and are particularly so stated in that part of the specifications referring to same. The said warranties will commence at the same time as the General Warranty."

"3.5.7 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."

3.8 ALLOWANCES

Add the following Section:

"3.8.1 For costs to be covered under a project allowance, (included in the schedule of values) the Contractor shall submit a summary of those costs anticipated and an Allowance Access Authorization Form to the Architect and Owner, reflecting the projected costs. The Allowance Access Authorization Form must be signed by the Owner prior to initiating any work associated with the allowance."

3.10 CONTRACTOR'S INSTRUCTIONS AND SUBMITTAL SCHEDULES

3.10.1 As indicated "after and over" and before site clean up and site restoration.

State "after and over" as required to maintain a current submittal schedule in the first sentence.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Section:

"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, and other items including all appurtenances that will be concealed by construction. The Contractor shall provide invert elevations."

"3.11.2 At the completion of the project, the Contractor shall obtain a set of the conformed contract 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 Upon completion of the work noted in 3.11.2 the contractor shall schedule a meeting with the Architect/Engineer and Owner to review the final record drawings and closeout documents prior to submission. After this meeting the Contractor shall make adjustments per the review, and submit one (1) original markup and (2) copies of the red line drawings (as-built conditions, to the Owner and one (1) print to the Architect. In addition, attach one complete set of the as-built documents to each of the Operating and Maintenance Instructions/Manuals. The Contractor will include (2) USB drives, each containing all "red line drawings (as-built) and Closeout Documents properly tabbed in accordance with closeout requirements as defined elsewhere in the contract documents."

- 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
- 3.12.10.2 Strike "If the Contract Documents require" from the beginning of the sentence.
- 3.12.10.2 Strike "to" between "professional" and certify" and replace with "shall".
- 3.17 Insert "indemnify and" between "shall" and "hold" in the second sentence.

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.2 ADMINISTRATION OF THE CONTRACT

4.2.7 Strike the first sentence and replace with the following:

NOT FOR

"The Architect will approve or disapprove any action of the Contractor, including submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents."

4.2.7 Strike the second sentence 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."

BIDDING

Add the following Section:

"4.2.0.1 There shall be no full-time Project Representatives provided by the Owner or Architect on this project."

"4.2.3 and in accordance with local requirements." to the end of the sentence."

ARTICLE 5: SUBCONTRACTORS

PURPOSES

5.2 AVOID SUBCONTRACTORS AND CONTRACTORS FOR PORTION OF THE WORK

5.2.3 Strike Section 5.2.3 in its entirety and replace with the following:

"If the Owner or Architect has reasonable objection to a subcontractor engaged 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."

5.2.4 Strike Section 5.2.4 in its entirety and replace with the following:

"The Contractor may not substitute any Subcontractor listed in its Bid unless the Contractor complies with the requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4. Failure to comply with this requirement shall subject the Contractor to a penalty as outlined in Section 5.2 of the Owner's General Requirements."

Add the following Section:

"5.2.5 The Contractor shall comply and shall ensure all Subcontractors comply with all requirements for drug testing as set forth in TITLE 19 LABOR DELAWARE ADMINISTRATIVE CODE 4000 Office of Management and Budget 4100

Division of Facilities Management **4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects.”**

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

6.1.1 Strike “and waiver of subrogation” from the end of the second sentence.

6.1.4 Strike Section 6.1.4 in its entirety.

6.2 MUTUAL RESPONSIBILITY

6.2.3 Strike “shall” and replace with “may” in the second sentence.

ARTICLE 7: CHANGES IN THE WORK

(SEE ARTICLE 7: CHANGES IN WORK IN THE STATE OF DELAWARE DIVISION OF FACILITIES MANAGEMENT GENERAL REQUIREMENTS)

7.2 CHANGE ORDERS

As per the following Sections:

“7.2.2 In addition to the above:

7.2.2.1 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.

7.2.2.2 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 markup not to exceed seven and one-half percent (7.5%) on the Subcontractor's work.

7.2.2.3 Where the Third Tier Contractor is doing the additional work, the Third-Tier contractor will be allowed a markup of fifteen percent (15%) overhead and profit on changes order work above and beyond the direct costs stated previously. To this amount, the Subcontractor will be allowed a markup not to exceed seven and one-half percent (7.5%) on the Third-Tier Contractor's work and the General Contractor will be allowed a markup not to exceed seven and one-half percent (7.5%) of the amount of the Subcontractor's markup.

7.2.2.4 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.

7.2.2.5 These markups shall include all costs including, but not limited to: overhead, profit, bonds, insurance, supervision, etc.”

- 7.3.4.1 Strike “and other employee costs approved by the Architect” after “worker’s compensation insurance,”
- 7.3.4.4 Add “work attributable to the” before “change” at the end of the sentence.
- 7.4 MINOR CHANGES IN THE WORK
Add “unless such changes are approved” at the end of the third sentence.

ARTICLE 8: TIME

8.2 PROGRESS AND COMPLETION

8.2.1 Add the following Section:

“8.2.1.1 Add the following Section:
 “8.2.1.2 After “by the Contractor” strike “and” and insert “to”.
 8.2.1.3 Add the following Section:

“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 “binding dispute resolution” and insert “any and all remedies in law or equity”.
Add the following Section:

“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 provision shall constitute a breach of contract for the purpose of time or force based upon said cause.”

Strike Section 8.3.2.2 in its entirety and replace with the following:

“Except in the case of a suspension of work directed by the Owner, suspension time under the provisions of Section 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.”

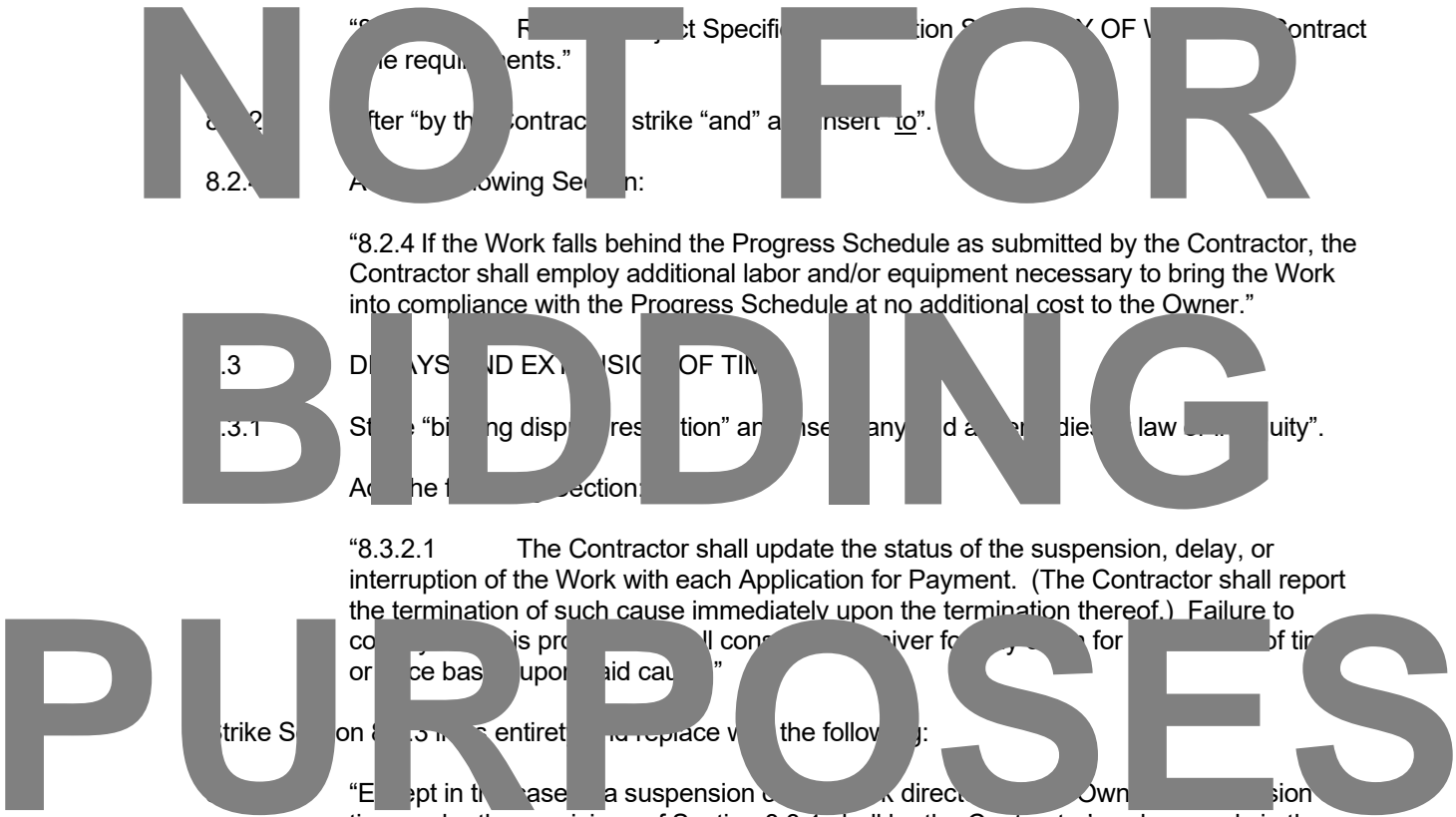
Add the following Section:

“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 Sections:



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

"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 1.5% of the initial contract amount."

9.3 APPLICATIONS FOR PAYMENT

9.3.1 Strike Section 9.3.1 in its entirety and replace with the following:

"At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values for completed portions of the Work. The application shall be prepared and submitted with all data supporting the Contractor's right to payment that the Owner, Architect require, such as copies of receipts, approved releases and invoices from subcontractors and suppliers. All data shall reflect retainage."

and the following Sections:

"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."

"9.3.1.4 Upon Closeout Documents have been received and outstanding items completed the Owner will pay 5% (twenty-five percent) of the amount due the Contractor on account of progress payments."

"9.3.1.5 The Contractor shall submit 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

After the following Sections to 9.5.10:

9.5.8 Failure to provide a current Progress Schedule;

9.5.9 Failure to attach a lien waiver;

9.5.10 Failure to comply with mandatory requirements for retaining documents.

9.6 PROGRESS PAYMENTS

9.6.1 Strike Section 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."

9.6.8 Strike "Provided the Owner has fulfilled its payment obligations under the Contract Documents," in the first sentence.

9.7 FAILURE OF PAYMENT

Strike Section 9.7 in its entirety and replace with the following:

"If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within fourteen days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within thirty days after the date established in the Contract Documents, the amount certified by the Architect, then the Contractor may, upon thirty additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents."

9.8 SUBSTANTIAL COMPLETION

9.8.3 At the end of Section 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 the social and economic consequences including but not limited to any Architect fees."

9.8.5 Strike "shall and insert may" in the second sentence.

9.8.6 Insert "of the" after "make payment" in the second sentence.

9.9 PARTIAL OCCUPANCY OR USE

9.9.1 Strike the the first sentence and replace with the following (the remainder of the Section remains)

"The Owner may only use any completed or partially completed portion of the Work at any stage when such portion is designated by the Contractor in a written agreement with the Contractor, provided such occupancy or use authorized by public authorities having jurisdiction over the project. Such agreement shall remain in force until final payment is made by the Contractor as required by the Contract Documents" and replace with "shall remain in force until final payment is completed" in the first sentence.

9.10.4.4 Strike "if permitted by the Contract Documents,"

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

Add the following Sections:

10.1.1 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 Section:

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.

10.2.5 Strike the second sentence in its entirety.

10.3 HAZARDOUS MATERIALS AND SUBSTANCES

10.3.3 Strike Section 10.3.3 in its entirety.

10.3.4 Insert "hazardous" in the last sentence after "handling of such".

10.3.6 Strike Section 10.3.6 in its entirety.

ARTICLE 11: INSURANCE AND BONDS

11.1 CONTRACTOR'S INSURANCE AND BONDS

11.1.1 Strike "Owner" from the third sentence.

11.1.2 OWNER'S LIABILITY INSURANCE
Strike 11.1.2 in its entirety, except that the use of "owner" in which case Section 11.1.2 shall remain.

11.1.3 WORKER'S COMPENSATION INSURANCE

Delete Section 11.3 in its entirety

11.4 LOSS OF USE, BUSINESS INTERRUPTION, AND DELAY IN COMPLETION
IN

Delete Section 11.4 in its entirety

ARTICLE 12: COVERING AND CORRECTIVE WORK

12.2.2 AFTER SUBSTANTIAL COMPLETION

Add the following Section:

"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 non-conforming work and that required under contract including any damage to the structure."

12.2.2.1 Strike all references to "one year" or "one-year" and replace with "two years".

12.2.2.2 Strike "one-year" and replace with "two years".

12.2.2.3 Strike "one-year" and replace with "two years".

12.2.5 Strike "one-year" and replaced with "two years".

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

Strike the last sentence.

13.4 TESTS AND INSPECTIONS

13.4.1 Strike the last sentence and replace with the following:

"The Owner shall pay for tests, inspections, or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor."

13.5 INTEREST

Strike "the date payment is due at such date 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" and replace with "30 days of presentment of the authorized Certificate of Payment at the annual rate of 12% or 1% per month."

Insert the following Section:

"13. CONFLICTS WITH FEDERAL, STATE, AND REGULATORY REQUIREMENTS"

13.1 If any provision, specification or requirement of the contract documents conflict or inconsistent with any statute, law or regulation of the government of the United States or America, the Contractor shall notify the Architect and immediately upon discovery."

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

4.1 TERMINATION BY THE CONTRACTOR

4.1.1.4 Insert ", upon the Contractor's request," after "finish to the Contractor"

Strike "and profit on Work not executed" after "as a result of reasonable overhead" and replace with ", profit, and reasonable"

14.3 SUSPENSION BY OWNER FOR CONVENIENCE

14.3.2 Strike "Adjustment of the Contract Sum shall include profit".

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

14.4.3 Strike Section 14.4.3 in its entirety and replace with the following:

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

ARTICLE 15: CLAIMS AND DISPUTES

15.1 CLAIMS

15.1.2 TIME LIMITS ON CLAIMS

Strike the last sentence.

15.1.3 NOTICE OF CLAIM

Strike all references to "21" and replace with "45".

15.1.5 CLAIMS FOR ADDITIONAL COSTS

Strike the first sentence and replace with the following:

"Claims shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement, in the first sentence. The approval or rejection of a Claim by the Architect shall be subject to mediation and any or all remedies at law or in equity."

15.1.7 NOTICE OF CLAIM FOR CONSEQUENTIAL DAMAGES

Strike Section 15.1.7 in its entirety.

15.2 INITIAL DECISION

5.2.1 State "any binding dispute resolution" and replace with "any and all remedies at law or in equity".

5.2.5 Strike Section 15.2 in its entirety and replace with the following:

"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 any or all remedies at law or in equity."

5.2.6 Strike Section 15.2 and its Subsections in their entirety.

15.3 MEDIATION

Strike "binding dispute resolution" and replace with "any or all remedies at law or in equity".

15.3.2 Strike ", shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement," in the first sentence.

15.3.2 Strike all references to "binding dispute resolution" and replace with "any or all remedies at law and in equity".

15.3.3 Strike Section 15.3.3 in its entirety.

15.4 ARBITRATION

Strike Section 15.4 and its Subsections in their entirety.

END OF SECTION

SECTION 00 73 43

WAGE RATE REQUIREMENTS

ARTICLE 1: GENERAL PROVISIONS

- 1.1 Prevailing wages are applicable to this project per the requirements noted in Delaware's Prevailing Wage Law, 29 Del.C. §6960 and Regulations as noted.
- 1.2 Prevailing Wage Rates, as directed by Delaware Law, must be adhered to where applicable. Davis-Bacon Act wages, in accordance with Subchapter IV of Chapter 31 of Title 40USC, must be adhered to. Contractors must pay the higher of the two rates.
- 1.3 A copy of the Prevailing Wages letter from the Delaware Department of Labor, and Davis-Bacon Act for the project is attached.

END OF SECTION

**NOT FOR
BIDDING
PURPOSES**



STATE OF DELAWARE
 DEPARTMENT OF LABOR
 DIVISION OF INDUSTRIAL AFFAIRS
 OFFICE OF CONSTRUCTION ENFORCEMENT
 CHAPMAN BLDG., STE. 210
 252 CHAPMAN RD.
 NEWARK, DE. 19702

Via Electronic and Regular Mail

September 25, 2024

Patrick McGay
 600... Ave
 Dover, DE 19901

NOT FOR

Re: C9004020004 Owens Campus - Parking Lot Rehabilitation, Sussex County, DE

Dear Mr. McGay:

I am responding to your request for a determination for project C9004020004 Owens Campus - Parking Lot Rehabilitation, which is a state and local construction project located in Sussex County, DE. The work consists of rehabilitation and repaving of parking lots with an estimated project budget of approximately \$360,000.00.

Based upon the information you provided the Department of Labor has determined that this project is a Highway Construction project.

Delaware's Prevailing Wage regulations provide that the rates applicable to a project are the rates in effect on the date of publication of the regulations for that project. I have enclosed a certified copy of the March 2024 prevailing wage rates for Highway Construction. These rates are included in your communication. However, please be advised that if the project is not executed within one hundred and twenty (120) days from the earliest date the specifications were published, the rates in effect at the time of the execution of the contract shall be the applicable rates for the project.

This determination is directed solely to the parties identified herein. It is based on the unique facts relevant to this matter. It does not constitute precedent and should not be cited as such by future parties.

Pursuant to 19 Del. Chapter 36, all contractors must obtain their Contractor Registration Certificate prior to performing construction services or maintenance work throughout Delaware. Contractors can submit an application by visiting the Delaware One Stop https://onestop.delaware.gov/Operate_Contractors.

PURPOSES

Additionally, effective July 26, 2023, SSI for SB102 amends Delaware's Prevailing Law 29 Del.C.6960(b) now requires these applicable prevailing wage rates to be paid to all workers who perform custom fabrication work regardless of where the work is performed. For further information regarding custom fabrication see 29 Del.C.6902(8).

Lastly, please see the enclosed debarment list. Entities/individuals listed shall not be permitted to bid on, be awarded or work on Delaware State funded construction projects, in the timeframe specified, as provided for under 29 Del.C.6960 or other applicable State statutes.

If you have any questions or I can provide any additional assistance, please do not hesitate to contact me at (302) 451-3458.

Sincerely,

Nicholas Ievoli

Labor Law Enforcement Officer II

Nicholas.Ievoli@delaware.gov

Enclosure

**NOT FOR
BIDDING
PURPOSES**

STATE OF DELAWARE
 DEPARTMENT OF LABOR
 DIVISION OF INDUSTRIAL AFFAIRS
 OFFICE OF LABOR LAW ENFORCEMENT
 PHONE: (302) 318-2769

Mailing Address:
 252 Chapman Road
 Suite 210
 Newark, DE 19702

Located at:
 252 Chapman Road
 Suite 210
 Newark, DE 19702

PREVAILING WAGES FOR HIGHWAY CONSTRUCTION EFFECTIVE MARCH 15, 2024

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
BRICKLAYERS	65.24	65.24	69.05
CARPENTERS	65.85	61.06	49.30
CEMENT FINISHERS	70.64	43.32	44.16
ELECTRICAL LINE WORKERS	35.65	57.63	28.21
ELECTRICIANS	81.12	81.12	1.62
IRON WORKERS	80.11	31.61	33.63
LABORERS	54.16	50.51	49.65
MILLWRIGHTS	21.18	20.18	17.93
PAINTERS	81.19	29.19	1.29
PILEDRIVERS	95.51	31.53	88.62
POWER EQUIPMENT OPERATORS	82.31	52.56	48.15
SHEET METAL WORKERS	30.20	26.96	24.40
TRUCK DRIVERS	51.71	48.18	45.64

NOT FOR BIDDING

CERTIFIED 9-25-24 by [Signature] 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 DETERMINING THE APPROPRIATE RATE FOR EACH CLASSIFICATION. PHO: (302) 318-2769. UN-REGISTERED CONTRACTORS SHALL PAY THE MECHANIC'S LIEN FEE.

PURPOSES

PROJECT: 004 Greens Campus Parking Lot, Litat., Sussex



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.

NOT FOR BIDDING PURPOSES

Contractor	Address	Date of Debarment
Mullen & Sons, Inc. and Daniel Mullen, individually	3375 Garrison Road, Boothwyn, PA 19060	Indefinite/19 Del.C. 23 (f) Civil Contempt
State Contractors Corporation and Rose Oscariver, individually	12004 Hathaway Drive, Silver Spring, MD 20906	Indefinite/19 Del.C. 23 (f)
Green, Jason and Jason Green, individually	6 Heathwood Court, PA 19111	Indefinite/19 Del.C. 23 (f) Civil Contempt
Pro Image Landscaping, Inc. and Owner(s)	23 Commerce Street, Wilmington, DE 19801 and/or 22 Cambridge DE 19701	Indefinite/19 Del.C. §108 & 10 Del.C. 23 (f)
Liberty Mechanical LLC and Owner(s), individually	32 Duncan Road, Wilmington, DE 19801	Indefinite/19 Del.C. 23 (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)
ACH 1, INC.	873 Salem Church Road, Newark, DE 19702	Indefinite/19 Del.C.6960

Updated: July 6, 2022

SECTION 00 81 13

GENERAL REQUIREMENTS

TABLE OF ARTICLES

1. GENERAL
2. OWNER
3. CONTRACTOR
4. ADMINISTRATION OF THE CONTRACT
5. SUBCONTRACTORS
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9. TESTS AND COMPLETION
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11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK

SCHEMATIC DEVELOPMENT
TERMINATION AND RESCINDMENT OF THE CONTRACT

NOT FOR
BIDDING
PURPOSES

ARTICLE 1: GENERAL

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 EQUITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORK

1.2.1 For Public Work 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 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 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 place accessible 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, sexual orientation, gender identity or national origin.

ARTICLE 2: GENERAL

(NO ADDITIONAL GENERAL REQUIREMENTS - SEE GENERAL REQUIREMENTS (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 accordance with the Contract Documents. The Contractor shall be responsible for these requirements, including substitutions not properly approved, which may be considered defective. If required by the Owner, the Contractor shall provide evidence as to the kind and quantity 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 orders of any authority having jurisdiction over performance of the Work. The Contractor shall promptly notify the Owner if the laws, ordinances and regulations are observed to be arbitrary or otherwise. The Contractor shall be responsible for the performance of the Work.
- 3.9 The Contractor shall be responsible for the general supervision and coordination of the Contractor's employees, Subcontractors and the 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 the Premises all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall be responsible for returning all damaged articles to their original condition.
- 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 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 and subcontractors and suppliers 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 the sum of money due the person for such labor and material. The bond shall 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 In making Performance Bonds, the Agency may, when it considers the interest of the State so requires, cause judgment to be deposited upon the bond.

4.1.5 Within thirty (30) days after the date of notice award of contract, the Bidder from the award shall furnish a Performance Bond and Labor and Material Payment Bond, each equal to the amount of 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 Payment shall be retained in escrow (within 30 days) for a period of two (2) years after the date of final Certification for Final Payment. The Performance Bond shall ensure the satisfactory completion of the Project and that the Contractor will make good all faults or defects in his work which may develop during the period of said guarantee as a result of improper or defective workmanship, materials or apparatus whether furnished by themselves or their subcontractors. The Contractor 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.

- 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. Defaulted in the performance on the portion of work covered by the Subcontract; or
- D. Is no longer engaged in such business.

5.1.5 Should a Bidder intend a successful Bidder shall provide an agency with a taxpayer identification number of such subcontractor. Such number shall be provided in the letter of invitation which such subcontractor is required to be identified on the time the contract is executed. The successful Bidder shall provide to the Agency within 3 days of entering into such public works contract copies of the Delaware Business license of such subcontractor and an independent contractor 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.

5.1.6 The Contractor may employ additional subcontractors on the jobsite only after submitting a copy of the subcontractor's Employee Drug Testing Program to the Owner for approval. A contractor's subcontractor shall not commence work until the Owner has concluded its review and determined that the subcontractor's Employee Drug Testing Program complies with OSHA Regulation 4104.

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 Access Board unless otherwise exempt by the Board.

5.5 CONTRACT PERFORMANCE

5.5.1 Any Contractor entering into a Public Works Contract that neglects or refuses to perform or fails to complete 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 provide 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: CHANGE IN WORK

7.1 The Owner, without inverting the Contract, may alter or change in the Contract, including 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 Orders signed by the Architect, as authorized agent, in the presence of 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 prevailing wage rates plus a maximum multiplier of 1.35 times DPE. For example, if the prevailing wage rate is \$50/hour, the DPE would be \$67.50/hour (50 x 1.35).

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:

7.3.3.1 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.

7.3.3.2 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 to exceed seven and one-half percent (7.5%) of the amount of the Subcontractor's work.

7.3.3.3 When the Third-Tier Contractor is going to complete the additional work, the Third-Tier Contractor will be allowed a markup of fifteen percent (15%) of the amount of profit on change order work above and beyond the direct costs stated previously. To this amount, the Subcontractor will be allowed a markup not to exceed seven and one-half percent (7.5%) on the Third-Tier Contractor's work and the General Contractor will be allowed a markup not to exceed seven and one-half percent (7.5%) of the amount of the Subcontractor's markup.

7.3.3.4 All additional work shall be for changes stated in the Contract's onsite superintendent staff, or project manager, unless a change in the work changes the project location and is initiated by the PM's check list. There will be no other costs associated with the change order.

7.3.3.5 These markups include all costs including but not limited to overhead, bonds, insurance, supervision, etc.

ARTICLE 8: TIME

8.1 The limits, if any, are as stated in the Project Manual. In executing the Agreement, the Contractor certifies that he estimates the work to be completed within the time frame.

8.2 If progress of the work is delayed at any time by changes in the work, 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 finding in favor of the Agency, the Director may suspend a Contractor from holding in any project funds, in whole or in part with public funds, for one to two years for a first offense, to 3 years for a second offense, and permanently debar the Contractor from the project. The Director shall issue a written decision and shall send a copy to the Contractor and the Agency. The decision may be appealed to the Superior Court within thirty (30) days for a review on the record.”

8.5 RETAINAGE

- 8.5.1 For Section 6516, Title 29, Delaware Code, the Agency may, beginning on each public works project establish a time schedule for the completion of the project. If the project is delayed beyond the completion time 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 time 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 “presentment” (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, receipts will be received from all Contractor, Subcontractor, and material, men, etc., for the previous payment to each company each application for payment. Following such request, no payment will be made unless receipts 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 After the Work has been substantially completed, completion thereof is materially delayed through no fault of the Contractor and although permitted by 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 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 a five percent (5%) retainage if determined appropriate, shall be made within thirty (30) days after the Work is fully completed and the Contractor has performed and provided that the Contractor has submitted the following proposed 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 notice to comply with the laws of the State of Delaware, and the rules and regulations 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, 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 previously unknown hazardous material such as 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 and laws and in accordance with the Contract. The Architect will not be required to participate in or to perform this operation. Upon completion of the work, the Owner will notify the Contractor and Architect in writing that there has been a lead and/or asbestos survey by the authorities in order for the work to proceed. The Contractor shall furnish current information on the quantities of substances and the location of materials to be submitted at the close of the project.

10.2.1 Any activities with the potential to disturb lead-based materials should be performed by the Contractor in accordance with OSHA regulations pertaining to Lead in Construction, 29 CFR 1926.62, Lead.

10.2.1.1 The Contractor shall notify the Owner immediately if they discover or previously know of materials that the suspect may contain lead. The Owner will arrange with a qualified specialist for identification and testing and advise the Contractor of the results. In the case that testing identifies potential lead-based materials, the Contractor shall continue performance of the work that has the potential for disturbance associated in accordance with OSHA regulations pertaining to Lead in Construction, 29 CFR 1926.62, Lead.

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 coverage 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 use or misuse of any injury to or destruction of any property arising out of the use or misuse 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, owned 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, may be provided by the Contractor under this contract. The Owner shall own the existing building and all of its contents and all 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 (pallets and stacks) and their tools and equipment, wherever 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 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	\$1,000,000	for each occurrence
	\$3,000,000	aggregate
Property Damage	\$1,000,000	for each occurrence
	\$3,000,000	aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000	for each occurrence
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	\$3,000,000	aggregate
Property Damage	\$1,000,000	for each occurrence
	\$3,000,000	aggregate

11.7.3 Automobile Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000	for each person
	\$1,000,000	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 Workers' Compensation (including Employer's Liability)

11.7.5.1 Minimum Limit of employer liability to be as required by law.

11.7.5.2 Minimum coverage for all employees working at the 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, in connection with or arising out of the Contractor's business, the Contractor shall account, fulfill and exclude liability for 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, Contractor shall furnish Owner such information on payrolls, employment records as may be necessary to enable Owner to comply with laws imposing the aforesaid contributions or taxes.

11.7.7.3 If the Owner is required by law to and does so pay any and/or other 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 shall be verified by the Contractor and measured at the project site. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Owner for clarification before any work is 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 material required for these tests and shall deliver same without charge to the testing laboratory of the designated agency 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 Historical and Preservation Department in the manner and according to the procedure to permit these authorities, or persons designated by them, to examine the area and secure the proper removal of the archaeological evidence in a suitable manner 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 OR SUSPENSION OF THE 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, the Agreement may be terminated on the first business day of the first fiscal year for which funds are not appropriated or at the expiration of the appropriation. The Owner may terminate this Agreement by providing written notice to the Contractor of such non-appropriation. All payment obligations of the Contractor shall 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

**NOT FOR
BIDDING
PURPOSES**

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 maintain testing data that includes but is not limited to the data elements below.

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 negative or positive random test: _____

Date: _____

PURPOSES

This form is not required to be submitted to the Owner. Included as a reference to show information required to be maintained by the Contractor. The Owner shall have the right to periodically audit all Contractor and Subcontractor test results at the Contractor's or Subcontractor's offices (or by other means to make the data available for inspection by the Owner).

**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 to be taken by 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.

**Delaware Technical Community College
Owens Campus**
Contract #: DTCC: C9004020004

**AFFIDAVIT OF
CRAFT TRAINING COMPLIANCE**

We, the contractor, hereby certify that we and all applicable subcontractors will abide by the contractor and subcontractor craft training requirements outlined below for the duration of the contract. Craft training must be provided by a contractor and/or subcontractor for each craft on a project for which there are Delaware Department of Labor approved and registered training programs or, if the contractor and/or subcontractor meets the requirements under Title 29, Chapter 69, Section 6960A.(b)(1)c.1.-3., payment may be made in accordance with Title 29, Chapter 69, Section 6960A.(b)(1)d. A list of crafts for which there are approved and registered training programs is maintained by the Delaware Department of Labor and can be found at: <https://www.delaware.gov/media/det/apprenticeship/2022-Craft-Training-List-2020-2022.pdf>. If you have questions regarding craft training programs, please submit all questions in writing to the Delaware Department of Labor at: apprenticeship@delaware.gov. ***This Affidavit of Craft Training Compliance must be submitted prior to contract execution.***

In accordance with Title 29, Chapter 69, Section 6960A.(a)(1), a contract relating to a public works project under § 6901 of Title 29 must include craft training programs for each craft on the project if at the time the contractor executes public work contract all the following apply:

- the project meets the prevailing wage requirement under Section 6901 of Title 29;
- the contractor employs more than 10 employees;
- The project is not a federal highway project, except for the project under Section 6962(c)(11) of Title 29;
- There is an apprenticeship program for a craft in the project on the list of crafts under Section 6904(b)(2) of Title 29.

Pursuant to Title 29, Chapter 69, Section 6960A.(a)(2), ***the contractor must commit the full amount of the contract to the training program.*** Paragraph (1) of this section applies to the subcontractor. Failure to provide required craft training payment on the project may subject the successful contractor and/or subcontractor(s) to penalties as outlined in Title 29, Chapter 69, Section 6960A.(a)(3).

Craft(s): _____

Contractor Name: _____

Contractor Address: _____

**Contractor Program
Registration Number(s)** _____

On this line also indicate whether DE, Other State (identify) or US Registration Number

Or

A payment has been made in the amount established under Section 204(b)(2)b.2. of Title 19, for the craft into the Delaware Department of Labor’s Apprenticeship and Training Fund.

Or

Craft Training requirements are not applicable because:

Authorized Representative (typed or printed): _____
Authorized Representative (signature): _____
Title: _____

State of Delaware)
County of _____) ss

Before me, a notary public, in and for said county and state, personally appeared,
_____, known to me to be the _____, did execute the foregoing instrument on
behalf of _____.
IN WITNESS WHEREOF, I have subscribed my name and sealed my office on the
_____ day of _____, 20____.

Notary Public
Commission Expires _____

THIS PAGE MUST BE SIGNED AND NOTARIZED TO BE CONSIDERED.

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Name: Delaware Technical Community College: Owens Campus – Parking Lot T Rehabilitation.

1. Project Location: Delaware Technical Community College
21179 College Drive
Georgetown, Delaware 19947

B. Owner: Delaware Technical Community College

1. Owner's Representative: Mark DeVore: Mark.devore@dtcc.edu

C. Engineer: Verdantas LLC, 1060 South Governors Ave., Suite 101, Newark, DE 19904

1. Engineer's Representative: Shane M. Christie, P.E.: Schristie@verdantas.com

D. Work consists of, but is not limited to, mow & water, installation of stormwater management system and restoration of Parking Lot T.

1.2 SPECIFICATION CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 17-division format and CSI/CSC's "MasterFormat" numbering system.

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

1. Abbreviated Language: Language used in the Specifications and Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

- a. 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.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 011000

**NOT FOR
BIDDING
PURPOSES**

SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

B. Related Sections include the following:

1. Section 01770 "Closeout Procedures" for submitting warranties, Project Record Documents, and Maintenance

1.2 DEFINITION

A. Action Submittal: Written and graphic information that requires Engineer's responsive action.

B. Informational Submittals: Written information that does not require Engineer's approval. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

A. Electronic files of the Contract Drawings will be provided to Engineer for Contractor's use in preparing submittals.

B. 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.

Coordination of submittal processing will not be delayed because of need to review submittals concurrently for coordination. Engineer reserves the right to withhold action on submittals pending coordination with other submittals until related submittals are received.

C. Processing Time: Allow enough time for submittal processing, including coordination, as follows.

1. Time for review shall commence on Engineer's receipt of submittal.
2. Initial Review: Allow 15 working days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
3. Identification: Place a permanent label or title block on each submittal for identification.
4. Indicate name of firm or entity that prepared each submittal on label or title block.
5. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Engineer.

D. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals.

- E. Additional Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal. Additional copies submitted will be marked with action taken and will be returned.
- F. Transmittal: Package each submittal individually and appropriately for shipping and handling. Transmit each submittal using a transmittal form. Submittals received from sources other than Contractor will be returned without Engineer's review.
1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
 2. Include Contractor's written statement of information submitted with requirements of the Contract Documents. The Engineer may approve Contractor's use of a rubber stamp to place the contractor's certification on submittals.
 3. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category of submittal.
 - g. Submittal purpose and description.
 - h. Marking of transmittal.
 - i. Signature of transmittal.
 - j. Relevant specification section or Contract Drawing number.
- G. Use for Construction: Use only final approved submittals with mark indicating action taken by Engineer in connection with construction.

PART 2 PRODUCTS

CONSTRUCTION SUBMITTALS

- A. General: Prepare and submit All submittals required in Individual Specifications Sections.
1. Number of Copies: Submit a minimum of six (6) copies of each submittal, unless otherwise indicated. Engineer will distribute four (4) copies and return the remaining copies to the Contractor.
 2. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 3. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 4. Mark each copy of each submittal to show which products and options are applicable.
 5. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.

- e. Manufacturer's catalog cuts.
- f. Wiring diagrams showing factory-installed wiring.
- g. Printed performance curves.
- h. Operational range diagrams.
- i. Mill reports.
- j. Standard product operating and maintenance manuals.
- k. Compliance with recognized trade association standards.
- l. Compliance with recognized testing agency standards.
- m. Application of testing agency labels and seals.
- n. Notation of coordination requirements.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Include the following information, as applicable:

- a. Dimensions.
- b. Identification of products.
- c. Fabrication and installation drawings.
- d. Rough-in and setting diagrams.
- e. Diagrams showing field-installed wiring, including power, signal, and control wiring.
- f. Shopwork manufacturing instructions.
- g. Templates and patterns.
- h. Schedules.
- i. Designations.
- j. Compliance with specified standards.
- k. Notation of coordination requirements.
- l. Notation of dimension establishment by field measurement.
- m. Wiring diagrams differentiating manufacturer-installed and field-installed wiring.

3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.

C. Samples: Prepare physical units of materials or products, including the following:

Sample for Initial Selection: Submit manufacturer's color charts consisting of units of material showing the full range of colors, textures, and patterns.
Sample for Verification: Submit full-size units of samples of the indicated, prepared from the same material to be used for Work. Worked and finished in manner specified and physically identical with the product to be used for use. That samples include 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.

3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Engineer's sample where so indicated. Attach label on unexposed side that includes the following:

- a. Generic description of Sample.
- b. Product name or name of manufacturer.
- c. Sample source.

4. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
 - a. If variation in color, pattern, texture, or other characteristic is inherent in the product represented by a Sample, submit at least three sets of paired units that show approximate limits of the variations.
5. Number of Samples for Initial Selection: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Engineer will return submittal with options selected.
6. Number of Samples for Verification: Submit three sets of Samples. Engineer will retain two Sample sets; remainder will be returned.

7. Disposition: Maintain set of approved samples at project site available for quality-control inspections throughout the course of construction. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

2.2 SUBMITTAL PROCEDURES

- A. General Preparation and Submission of Submittals required by other Specification Sections.
 1. Number of Copies: Submit six (6) copies of each submittal, unless otherwise indicated. Engineer will not return copies.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of the entity. That authorized person shall comply with requirements of Section 01330 - Quality Requirements.
- B. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.

- F. **Manufacturer Certificates:** Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- G. **Material Certificates:** Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- H. **Material Test Reports:** Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- I. **Compatibility Test Reports:** Prepare 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.

Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed either during installation of product or after products installed in its final location, for compliance with requirements.

Product Test Reports: Prepare written reports indicating current products produced by manufacturer complies with requirements. 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.

- L. **Installation Details:** Prepare written and graphic instructions and procedures for installation and normal maintenance of products and equipment, conforming with requirements in Division 5 Section 50600 - Installation Procedures.
- M. **Design Details:** Prepare written and graphic information including, but not limited to, performance criteria, list of applicable codes, 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.

N. **Manufacturer's Installation or Operation Information:** Prepare written information documenting manufacturer's communication guidelines, and procedures for installing or operating a product and equipment. Include name of product, name, address, and telephone number of manufacturer. Include the following, as applicable:

1. Preparation of substrate.
2. Required substrate tolerances.
3. Sequence of installation or erection.
4. Required installation tolerances.
5. Required adjustments.
6. Recommendations for cleaning and protection.

- O. **Manufacturer's Field Reports:** Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.

5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- P. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- Q. Material Safety Data Sheets: Submit information directly to Owner. If submitted to Engineer, Engineer will not review this information but will return it with no action taken.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

Review each submittal and check for compliance with the Contract Documents. Note corrections and dimensions. Mark with approval stamp before submitting to Engineer.

- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear contractor approval stamp and will return them without review.

- B. Action Submittals: Engineer will review each submittal to evaluate compliance with Contract Documents, make marks to indicate corrections or modifications required, and return it. The Engineer's review and notations with respect to shop drawings and other submittals do not relieve the Contractor of any obligations under the Contract Documents in any way and in response, Engineer will stamp each submittal with an action stamp to indicate action taken, and additional submittal requirements, if any, are marked on the drawings.

1. If the returned item is marked "Rejected", the Engineer has determined that the submittal is not adequate to establish that there is compliance with the Contract Documents and a new submission is required.
2. If the returned item is marked "Revise and Resubmit", it signifies that substantial changes in the shop drawing or other submittals are necessary and that the item must be resubmitted to the Engineer for further review.
3. If the item is marked "Returned with Notations", it signifies that the Engineer has noted minor changes or additions to the item that are necessary to satisfy the Contract Documents and that a resubmittal is not necessary unless otherwise noted.

- C. Informational Submittals: Engineer will review each submittal and will not return it or will reject and return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.

- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 01330

**NOT FOR
BIDDING
PURPOSES**

SECTION 01420 - REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the General Conditions.
- B. "Approved": When used to convey Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's duties and responsibilities as stated in the General Conditions.
- C. "Directed": A command or instruction by Engineer. Other terms including "requested," "authorized," "selected," "approved," "required," "permitted" have the same meaning as "directed."
- D. "Indicated": A requirement expressed by graphic representation or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and operation.
- G. "Install": Operations at Project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, marking to dimension, finishing, painting, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for use, intended use.
- I. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. "Licensed": When used with an entity, "licensed" means having successfully completed a minimum of five (5) previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.

D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standard, regulations, or other Code of Federal Regulations, telephone number, and Web-site addresses are subject to change and are believed to be accurate as of the date of the Contract Documents.

ADA - American with Disabilities Act (ADA)
Accessibility Guidelines for Buildings and Facilities
Available from Access Board (800) 872-2253
www.access-board.gov (202) 272-5434

CFR - Code of Federal Regulations
Available from Government Printing Office (888) 295-6228
www.access.gpo.gov/cfr (302) 521-1500

Department of Defense Specifications and Standards
Available from Defense Automated Printing Service (215) 697-6257
www.astimage.daps.dia.mil/online

FED-STD - Federal Standard
(See FS)

FS - Federal Specification
Available from Defense Automated Printing Service (215) 697-6257
www.astimage.daps.dia.mil/online
Available from General Services Administration (202) 696-8925
www.gsa.gov/procurement/specifm
Available from National Institute of Building Sciences (202) 272-7800
www.nib.org

MILSPEC - Military Specification and Standards
Available from Defense Automated Printing Service (215) 697-6257
www.astimage.daps.dia.mil/online

UFAS - Uniform Federal Accessibility Standards
Available from access Board (800) 872-2253
www.access-board.gov (202) 272-5434

1.3 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AASHTO	American Association of State Highway and Transportation Officials www.aashto.org	(202) 624-5800
ACI	American Concrete Institute/ACI International www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
ANSI	American National Standards Institute www.ansi.org	(202) 295-6000
ASCE	American Society of Civil Engineers www.asce.org	(800) 541-2233 (714) 296-6300
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723
ASME	ASME International The American Society of Mechanical Engineers (International) www.asme.org	(800) 843-2763 (212) 590-9000
ASSE	American Society of Sanitary Engineers www.asse-plumbing.org	(440) 335-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWS	American Welding Society www.aws.org	(800) 442-9353 (305) 442-9353
AWWA	American Water Works Association www.awwa.org	(800) 954-7337
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	CSA International (Formerly: IAS – International Approval Services) www.csa-international.org	(800) 463-6727 (416) 747-4000

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CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
HI	Hydraulic Institute www.pumps.org	(888)786-7744 (973) 267-9700
HMMA	Hollow Metal Manufacturers Association (See NAAMM)	
IEEE	Institute of Electrical and Electronics Engineers, Inc.) www.ieee.org	(212) 419-7900
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NFPA	National Fire Protection Association www.nfpa.org	(617) 349-3555 (617) 770-0000
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 675-2753 (703) 761-8010
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
	Steel Deck Institute www.steeldeck.org	(440) 885-1110
	SPC The Society for Protective Coatings www.spc.org	(877) 281-7773 (410) 281-2333
	Steel Tank Institute www.steeltank.com	(847) 441-1111
UL	Underwriters Laboratories Inc. www.ul.com	(800) 704-4050 (847) 272-8800
UNI	Uniform Concrete Pipe Association www.unipipe.org	(72) 222-3902
ASTEC	Astec Equipment Technology Association www.astec.org	(800) 441-2869 (214) 222-4700

B. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers www.usace.army.mil	
EPA	Environmental Protection Agency www.epa.gov	(202) 260-2090
GSA	General Services Administration www.gsa.gov	(202) 708-5082
HUD	Department of Housing and Urban Development	(202) 708-1112

	www.hud.gov	
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
USDA	Department of Agriculture www.usda.gov	(202) 720-2791

NOT FOR BIDDING

DNREC	Delaware Department of Natural Resources And Environmental Control www.dnrec.state.de.us	(302) 739-4506
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PART 2 PROPOSALS (not U.S.)
 PART 3 EXECUTION (not U.S.)

END OF SECTION 01420

PURPOSES

SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for selecting products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. See Division 1 Section 01770 "Closeout Procedures" for submitting warranties for contract closeout.
- C. See Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.2 DEFINITION

Product: Items purchased for incorporating into the Work, whether purchased for project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

- 1. **Named Products:** Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.

New Products: Products that have not previously been incorporated into the project or its quality. Products salvaged or recycled from other projects are not considered new products.

Compatible Product: Product that is demonstrated and approved through submittal process or where indicated in a product substitution, to meet the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

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

C. **Basis-of-Significance:** Specific criteria where a specified manufacturer's product and compared by the word "basis or design" including make or model number or other designation to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance and other characteristics for purposes of evaluating comparable products from other manufacturers.

- D. **Manufacturer's Warranty:** Required written warranty furnished by original manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

E. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

1.3 QUALITY ASSURANCE

- A. **Compatibility of Options:** If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store products in all-weather protection and in a secure location for construction sites. Store materials in a manner that will not endanger Project structure. Store products that are subject to damage by the elements and cover in a weathertight enclosure above ground with ventilation adequate to prevent condensation.
 8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 9. Protect stored products from damage.

1.5 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and not concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve contractor of obligations under requirements of the Contract Documents.
- B. Special Warranties: Prepare a written warranty that contains appropriate terms of identification, ready for execution. Submit a draft for approval before final execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
- C. Submittal name: [redacted] with reference in Division 1 Section 01100 "Sealed Air Products."

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Owner will make selection.

5. Where products are accompanied by the term "match sample," sample to be matched is Owner's.
6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

B. Product Selection Procedures: Procedures for product selection include the following:

1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named. Substitutions may be considered, unless otherwise indicated.
2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements. Substitutions may be considered, unless otherwise indicated.

Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements. Substitutions may be considered, unless otherwise indicated.

4. Manufacturers: Where Specification paragraphs or subparagraphs titled "manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Substitutions may be considered, unless otherwise indicated.

Available Products: Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.

5. Available Manufacturers: Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.

Bill-of-materials Product: Where Specification paragraphs or subparagraphs titled "Bill-of-materials Product" are included and also introduce or refer to a list of manufacturer names, provide the specific product named or a product by one of the other named manufacturers. Drawings and Specifications indicate sizes, file dimensions, and other characteristics that are used for the product name. Comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product. Substitutions may be considered, unless otherwise indicated.

8. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Engineer's sample. Engineer's decision will be final on whether a proposed product matches satisfactorily.
 - a. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.
9. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.

- a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Owner will select color, pattern, or texture from manufacturer's product line that does not include premium items.
- b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Owner will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Engineer will consider requests for substitution if received within 15 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Engineer.

Conditions: Engineer will consider contractor's request for substitution on the following conditions and provided the following conditions are not satisfied. Engineer will return requests for substitution except to record non-compliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
2. Requested substitution does not require extensive revisions to the Contract Documents.
3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect contract Construction Schedule.
6. Requested substitution has received necessary approval of Authority Having Jurisdiction.
7. Requested substitution is compatible with other portions of the work.
8. Requested substitution has been coordinated in other portions of the work.
9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

- A. Where products or manufacture are specified by name, submit the following, in addition to other required submittals to obtain approval of unnamed product:
1. Evidence that proposed product does not require extensive revision to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01600

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. General installation of products.
4. Progress cleaning.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.
8. Maintenance of Traffic.
9. Preconstruction and progress meetings.
10. Progress schedules.
11. Construction phasing and cooperation of existing facilities.

3. Related Sections include the following:

1. Division 1 Section 01330 "Submittal Procedures" for submitting surveys.
2. Division 1 Section 01770 "Closeout Procedures" for submitting Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final closeout.

1.2 QUALITY ASSURANCE

- A. Land Surveyor: Qualifications of professional land surveyor who is fully qualified to practice in Delaware and who is experienced in providing land surveying services of the kind indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
- B. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer not less than two (2) days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3. UTILITIES

- A. The Contractor shall plan for and implement all necessary requirements to prevent damage to any existing underground utility including, but not limited to, the following:
 - 1. To request from the office of each operator having a utility in the area, the location and other pertinent information on these utilities not less than two (2) working days but not more than ten (10) working days prior to the beginning of permanent work in the area.
 - To inform each person employed by the Contractor at the site (such as all of the information obtained regarding the location of utilities and the prevent intrusion.
 - 3. To report a break, leak, vent, surge, overflow or other damage to the operator immediately.
 - 4. To alert immediately the occupants of the premises as to any emergency that the Contractor may create or discover.
- B. The Contractor's attention is directed to the fact that the locations of existing utilities and other structures shown on the Drawings are approximate only. Prior to construction activities, the Contractor shall name the utility company to be contacted to determine the location of the utilities. The Contractor shall take all necessary measures to protect utilities or arrange for relocation during construction. All underground utilities shall be repaired by the Contractor at his expense according to the requirements of the utility specifications. The following utilities are located on or adjacent to the construction site:
 - 1. Electric Service – Delaware Electric Cooperative
 - 2. Water – Artesian Water Company, Inc.
 - 3. Sanitary Sewer – Artesian water Company

3.4 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.

3. Inform installers of lines and levels to which they must comply.
 4. Check the location, level and plumb, of every major element as the Work progresses.
 5. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.
 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and title of survey party personnel, and type of instruments used. The log shall be available for reference by Engineer.

3. SURVEYING AND ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Replace or destroy permanent benchmark or control point promptly. Report the need to locate permanent benchmark or control points to Engineer before proceeding. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacement on the original survey control points.

3.6 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
 2. Where spaces are limited, install components to maximize space available.
 3. Maintain clearances and ease of access for replacement.
 3. Conceal pipe, ducts, and wiring in finished areas unless otherwise indicated.
- B. Follow manufacturer's written instructions for mounting and installation of products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Engineer.
 2. Allow for building movement, including thermal expansion and contraction.

- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.7 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

Site Maintenance: Project site free of waste materials and debris.

- C. Work Areas: Clean areas where work is in progress to the level of cleanliness required for proper execution of the Work.
 - 1. Remove mud and spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer for fabric or product. Avoid use of cleaning materials specifically recommended. Use specific cleaning materials and methods recommended. Use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Surfaces: Remove debris from concealed space before enclosing the space.

F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, masonry, and similar materials.

- 1. Thoroughly clean pipes, conduits, and similar features before applying paint or other finishes. Remove pipe covering to its original condition.

H. Waste Disposal: Burying or burning waste materials on site will not be permitted. Washing materials down sewers into waterways will not be permitted.

- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.10 REPAIR OF DEFECTIVE CONSTRUCTION

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

- B. Repair permanent damage caused during construction to the specific condition.
- C. Remove and replace damaged surfaces that are exposed to traffic if surface cannot be repaired with visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that do not operate properly.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

3.11 MAINTENANCE OF TRAFFIC

- A. The Contractor shall indicate on the proposed schedule of construction any significant disruptions to traffic flow (affected lanes, streets affected) and construction options shall be indicated. An overall schedule for such disruptions, and any revisions shall be approved in writing by the Engineer. The Contractor shall notify the Engineer at least 48 hours in advance of any proposed disruption of traffic.
- B. Any disruption of the traffic shall be fully indicated by signs, barriers, and flagmen as approved by the Engineer.
- C. The Contractor shall provide for an maintain ingress and egress to and from the properties abutting the construction project after working hours. Construction activities, which may temporarily interfere with property access, shall be coordinated in advance with the property owners.
- D. All work within the right-of-way of State maintained roadways shall be done in full conformance with the specifications and requirements of the Delaware Department of Transportation.

3.12 PRECONSTRUCTION CONFERENCE

- A. Before any work at the site is started, a conference attended by the Contractor, Engineer, Owner and others as appropriate will be held to establish a working understanding among the

parties as to the Work, procedures for handling shop Drawings and other submittals, processing Applications for payment and maintaining other records.

- B. The Contractor shall submit a proposed progress schedule for the work at the Preconstruction Conference. No work shall commence until the progress schedule has been reviewed and accepted by the Engineer.
- C. The Contractor shall submit a preliminary schedule of Shop Drawing and Sample submittals at the Preconstruction Conference. The schedule shall list each required submittal and the times for submitting, reviewing, and processing each submittal.

3.13 PROGRESS MEETINGS

- A. Progress meetings shall be held monthly at a minimum unless otherwise required by the Owner or Engineer. During critical scheduling periods, progress meetings may be held bi-weekly at the discretion of the Owner.

The Contractor shall provide a proposed progress schedule at every progress meeting which reflects actual work completed and any proposed adjustments for future work.

3. CONSTRUCTION FINISHING AND OPERATION OF EXISTING FACILITIES

- A. The Contractor shall coordinate the Work with the Owner and Artesian Water Company, Inc.
- B. Contractor shall coordinate any proposed interruption or bypass of flows at the existing facility with the Owner and Engineer. Contractor shall provide a minimum seven (7) days notice prior to any proposed interruption of existing service.
- C. Contractor shall furnish temporary equipment and labor for providing bypass pumping of flows necessary to execute the Work in the Contract Documents. The proposed bypass pumping plan shall be submitted to the Engineer for review and approval not less than 15 days prior to any proposed interruption of service.

END OF SECTION 01700

PURPOSES

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
1. Inspection procedures.
 2. Project Record Documents.
 3. Operation and Maintenance Manuals.
 4. Warranties.
 5. Manufacturer's Field Reports.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of conditional acceptance, complete the following. List items below that are complete in required quantity and quality.
- Prepare a list of items to be completed and corrected (attach) and reasons why the work is not complete.
1. Cover boards, spare parts, extra materials, and similar items in location designated by Contractor with manufacturer's name and model number where applicable.
2. Complete start-up and tuning of systems.
4. Submit test/adjust/balance records.
 5. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 6. Touch up and repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for conditional acceptance. On receipt of request, Owner and Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a Certificate of Conditional Acceptance and a list of items to 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 Acceptance.

1.3 FINAL COMPLETION

- A. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Owner and Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer 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.

- B. The date of Final acceptance of the total project, or partial acceptance of individual systems shall be determined by the Engineer.

1.4 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings.

- 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is subcontractor or other, to prepare and submit Record Prints.

- a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
- b. Accurately record information in an understandable drawing technique.
- c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
- d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.

- e. Mark record sheets with a scale, red-ink record and blue-ink cover sheets to distinguish between changes for different categories of the work at same location.
- f. Mark important additional information that will either show or check against original drawings.
- g. Use Construction Change directive numbers, change order numbers, alternate numbers, and similar identification where applicable.

- 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.

- C. Miscellaneous Record Submittals: Submit all miscellaneous records required by Specification Sections for miscellaneous record keeping and substantial information with actual performance of the Work. Bind file miscellaneous records and identify each, and provide for continuation as needed.

1.5 OPERATION AND MAINTENANCE MANUALS

- A. The Contractor shall provide to the Engineer, six (6) copies of Operation and Maintenance Manual for the items listed below and one (1) PDF file, and for any other items as directed in writing by the Engineer. Manuals shall include spare parts list, printed instructions and diagrams required for service, repair or replacement, and name, address and phone number of agency that will make repair or replacement during warranty period and/or where spare parts may be obtained:

- 1. Low Service Pumps, LS, 3003 A&B
- 2. High Service Pumps, HS-3002 A&B
- 3. Well Pump, PU-3001
- 4. Flow Meters, FM-4002, FM-4008, FM-4009
- 5. Hydropneumatic tanks, HT-1001 A&B
- 6. pH/Chlorine Analyzer Panel, AN-4006
- 7. Level transmitters
- 8. Pressure transmitters

9. Air Release Valves
10. VFDs, Soft Starts, FVNR Starters, Transformer, Power Monitor, Surge Protective Device
11. Lighting Panel
12. Split Units
13. Unit Heaters
14. Security Systems Equipment
15. Autodialer
16. Motorized Louvers and Exhaust Fans.

- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.6 WARRANTIES

Submit Written Warranties on request of Engineer for designed items of the Work. Commencement of warranties other than date of Substantial Completion is indicated.

- B. Organize warranty documents into an orderly sequence based on the nature of contents of the Project Manual.

- C. The Contractor shall warrant that all workmanship, material, and equipment furnished and installed under the Contract Documents shall be free of defects for a period of one (1) year after the date of Final Acceptance of the Work. In the event there is more than one year of Final Acceptance, the warranty shall be for one (1) year after each acceptance of the Work. In the event that any defects appear, the Contractor shall repair or replace such defects at no cost to the Owner.

1.7 MANUFACTURER'S FIELD REPORT

- A. The Contractor shall obtain and deliver to the Engineer prior to the initiation of startup operations, Manufacturer's Field Reports for the following equipment:

1. Low Service Pumps, LS, 3003 A&B
2. High Service Pumps, HS, 3003 A&B
3. VFD Pumps, PU-001
4. Flow Meters, FM-002, FM-4008, FM-009
5. pH Chloride Analyzer Pumps, PU-006
6. VFDs, Soft Starts, FVNR Starters, Transformer, Power Monitor, Surge Protective Device
7. Security Systems Equipment
8. Air Exchange System

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
1. Provide instructors experienced in operation and maintenance procedures.
 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.

3. Schedule training with Owner, through Engineer, with at least seven days' advance notice.
 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. The manufacturer's representative shall issue a Manufacturer's Field Report attesting to conformance of the operation of the facilities to the Contract Documents.

END OF SECTION 01770

**NOT FOR
BIDDING
PURPOSES**

ALLOWANCE AUTHORIZATION

Project:

Architect:

Project No.

Contractor:

AAA No.:

Initiation Date:

The Allowance is allocated as follows:

NOT FOR

Total original Contract Allowance was:	\$
Amount of Contract Allowance Access previously authorized:	\$
Adjusted Contract Allowance per this Authorization:	\$
The amount of available allowance will decrease by this Access Authorization:	
The remaining available allowance, after this Access Authorization will be:	

BIDDING

Recommended by:

Architect

PURPOSES

By (Signature): _____
Date: _____

Accepted by: _____
Contractor

Approved by: _____
Owner

By (Signature): _____
Date: _____

By (Signature): _____
Date: _____

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes: Administrative and procedural requirements for construction waste management activities.

1.2 DEFINITIONS

A. Construction Debris: Debris resulting from construction, remodeling, alterations, repair, demolition and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage.

B. Salvage: Recovery of materials for on-site reuse, sale or donation to a third party.

C. Reuse: Making use of a material without altering its form. Materials can be reused on-site or reused on other projects off-site. Examples include, but are not limited to the following:
Crushing or grinding of concrete for use as sub-base material. Chipping of land clearing debris for use as mulch.

Recycling: The process of sorting, cleaning, reating and constituting materials for the purpose of using them as materials in the manufacture of new products.

Source Separated CDL Recycling: The process of separating recyclable materials in one container. The containers are generated on the site. The separated materials are hauled directly to a recycling facility or transfer station.

F. Co-mingled CDL Recycling: The process of collecting mixed recyclable materials in one container on-site. The container is taken to a material recovery facility where materials are separated for recycling.

Approved Recycling Facility: Any of the following:

1. Facility that can legally accept CDL waste materials for the purpose of processing them into another form for the manufacture of a new product.
2. Material Recovery Facility: A general term used to describe a waste-sorting facility. Mechanical, hand-separation, or a combination of both procedures, are used to recover recyclable materials.

H. Universal waste components (UWC) are as follows: electric motors, PCB ballasts, non PCB ballasts, capacitors, contactors, circuit breakers, elemental and liquid mercury containing articles, transformers, lead acid batteries, fluorescent light bulbs, and all HID light bulbs.

1.3 SUBMITTALS

- A. Contractor shall develop a Waste Management Plan: Submit 3 copies of plan within 14 days of date established for the **Notice to Proceed**.

- B. Contractor shall provide Waste Management Report: Concurrent with each Application for Payment, submit **3** copies of report.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Divert a minimum of **75%** CDL waste, by weight, from the landfill by one, or a combination of the following activities:

1. Salvage
2. Reuse
3. Source-Separated CDL Recycling
4. Co-mingled CDL Recycling

- B. CDL waste materials that can be salvaged, reused or recycled include, but are not limited to, the following:

1. Acoustical ceiling tiles
2. Asphalt
3. Asphalt shingles
4. Cardboard packaging
5. Carpet
6. Concrete
7. Drywall
8. Fluorescent lights and ballasts
9. Land clearing debris (vegetation, stumps, dirt)
10. Metals
11. Paint (through hazardous waste outlets)
12. Food
13. Plastics (shelving, shock wrap, packaging)
14. Window glass
15. Wood
16. Field office waste, including office paper, aluminum cans, glass, plastic, and office cardboard.

1.5 QUALITY ASSURANCE

Waste Management Coordinator Qualifications: Experience firm, with a record of successful waste management coordination of projects with similar requirements, employs a Licensed, Credited Professional, Certified by USGBC as Waste Management Coordinator.

- B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- C. Regulatory Requirements: Conduct construction waste management activities in accordance with hauling and disposal regulations of all authorities having jurisdiction and all other applicable laws and ordinances.
- D. Preconstruction Conference: Schedule and conduct meeting at Project site prior to construction activities.
1. Attendees: Inform the following individuals, whose presence is required, of date and time of meeting.
 - a. Owner
 - b. Architect

- c. Contractor's superintendent
- d. Major subcontractors
- e. Waste Management Coordinator
- f. Other concerned parties.

2. Agenda Items: Review methods and procedures related to waste management including, but not limited to, the following:

- a. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
- b. Review requirements for documenting quantities of each type of waste and its disposition.
- c. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
- d. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
- e. Review waste management requirements for each trade.

3. Minutes: Record discussion. Distribute meeting minutes to all participants. Note: if there is no Project Architect, they will perform this role.

1.6 WASTE MANAGEMENT PLAN – Contactor shall develop and document the following:

A. Develop a plan to meet the requirements listed in this section at a minimum. Plan shall consist of waste identification, waste reduction plan and cost/revenue analysis. Distinguish between demolition and construction. Indicate quantities by weight throughout the plan.

Indicate and date types and quantities of demolition, site cleanup and construction waste generated for the project. List all assumptions made for the quantities estimates.

C. List each type of waste and whether it will be salvaged, recycled, or disposed of in an landfill. The plan should included the following information:

1. Types and estimated quantities, by weight, of CDL waste expected to be generated during construction and completion.
2. Proposed methods for CDL waste salvage, reuse, recycling and disposal during demolition including, but not limited to, one or more of the following:

- a. Contracting with a construction specialist to salvage materials generated during demolition.
- b. Selective salvage as part of demolition contractor's work,
- c. Reuse of materials on-site or sale or donation to a third party.

3. Proposed methods for salvage, reuse, recycling and disposal during construction including, but not limited to, one or more of the following:

- a. Requiring subcontractors to take their CDL waste to a recycling facility;
- b. Contracting with a recycling hauler to haul recyclable CDL waste to an approved recycling or material recovery facility;
- c. Processing and reusing materials on-site;
- d. Self-hauling to a recycling or material recovery facility.

4. Name of recycling or material recovery facility receiving the CDL wastes.

5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
 1. Total quantity of waste.
 2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
 3. Total cost of disposal (with no waste management).
 4. Revenue from salvaged materials.
 5. Revenue from recycled materials.
 6. Savings in hauling and tipping fees by donating materials.
 7. Savings in hauling and tipping fees that are realized by recycling materials.
 8. Hauling and transportation costs. Including cost of collection containers for each type of waste.
 9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (continued)

PART 3 – EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT. GENERAL

Provide containers for CDL waste that is to be recycled clearly labeled as such with a list of acceptable and unacceptable materials. The list of acceptable materials must be the same as the materials recycled at the receiving material recovery facility or recycling processor. Collect and contain CDL waste that is non-recyclable waste must contain no more than 10% non-recyclable material, by volume.

- C. Provide containers for CDL waste that is disposed in a landfill clearly labeled as such.

Use reliable estimates to assess risks associated with potentially hazardous materials.

To the greatest extent possible, include in material purchasing agreements a provision for recycling that materials and equipment be covered in packaging made of recyclable material, that they reduce the amount of packaging that packaging be taken back for reuse or recycling and to take back all unusable product. Include subcontractors to require the same provisions in their purchase agreements.

- F. Conduct regular visual inspections of dumpsters and recycling bins to remove contaminants.

3.2 SOURCE SEPARATION

- A. General: Contractor shall separate recyclable materials from CDL waste to the maximum extent possible.

Separate recyclable materials by type.

1. Provide containers, clearly labeled, by type of separated materials or provide other storage method for managing recyclable materials until they are removed from Project site.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water and to minimize pest attraction. Cover to prevent windblown dust.
3. Stockpile materials away from demolition area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from weather.

3.3 CO-MINGLED RECYCLING

- A. General: Do not put CDL waste that will be disposed in a landfill into a co-mingled CDL waste recycling container.

3.4 REMOVAL OF CONSTRUCTION WASTE MATERIALS

- A. Remove CDL waste materials from project site on a regular basis. Do not allow CDL waste to accumulate.
- B. Transport CDL waste materials off Owner's property and legally dispose of the materials.
- C. Storing CDL waste is not permitted.

3.5 UNIVERSAL WASTE DIVERSION

- A. Remove all universal waste from fixtures, panels, and related devices for proper diversion and claim on.
- B. Store all universal waste in containers provided by contractor on monthly maintenance operations.
- C. Store universal waste in secure location and require periodic removal from assigned location.
- D. Exemption: electric motors, circuit breakers, transformers and lighting contactors are exempt from this provision provided the contractor chooses to salvage or reuse the components.

No identified hazardous waste or cardiac waste.

END OF SECTION

WASTE MANAGEMENT PROGRESS REPORT

MATERIAL CATEGORY	DISPOSED IN MUNICIPAL SOLID WASTE LANDFILL	DIVERTED FROM LANDFILL BY RECYCLING, SALVAGE OR REUSE		
		Recycled	Salvaged	Reused
1. Acoustical Ceiling Tiles				
2. Asphalt				
3. Asphalt Shingles				
4. Cardboard Packaging				
5. Carpet and Carpet Pad				
6. Concrete				
7. Drywall				
8. Fluorescent Lights and Ballasts				
9. Land Clearing Debris (vegetation, compact dirt)				
10. Metals				
11. Paint through hazardous waste				
12. Wood				
13. Plastic Film (sheeting, shrink wrap, packaging) Window Glass				
14. Field Office Waste (office paper, aluminum cans, glass, plastic and coffee cards, etc.)				
16. Other (insert description)				
17. Other (insert description)				
Total (In Weight)		(TOTAL OF ALL ABOVE VALUES – IN WEIGHT)		
		Percentage of Waste Diverted	(TOTAL WASTE DIVIDED BY TOTAL DIVERTED)	

NOT FOR BIDDING PURPOSES

SECTION 02300 - EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Preparing subgrades for slabs-on-grade, walks, pavements, lawns and grasses.
2. Excavating and backfilling for buildings and structures.
3. Drainage course for slabs-on-grade.
4. Subbase course for concrete pavements.
5. Subbase and base course for asphalt paving.
6. Subsurface drainage backfill for walls and trenches.
7. Excavation and backfill for utility trenches.

1.2 DESCRIPTION

B. Backfill: Soil material to control low-strength material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Course placed between subbase course and hot-mix asphalt paving.

C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Unsatisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Course supporting slabs-on-grade that also minimizes capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation placed shall be paid in accordance with Contract provisions for unit price.
2. Risk Excavation: Excavation more than 10 feet in width and more than 10 feet in length. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that cannot be efficiently removed by normal job equipment such as power shovels (e.g. Caterpillar 235C) or bulldozers (e.g. Caterpillar D9N with ripper attachment).

I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

- J. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- K. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- L. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.3 SUBMITTALS

- A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to ASTM D 2487 of each borrow soil material proposed for fill and base.
 - 2. Laboratory compaction curve according to ASTM D 1557 for each borrow soil material proposed for fill and backfill.

1.4 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.

- B. Notify Engineer at least ten (10) days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
 - 3. Contact utility locator service in area where Project is located not less than two (2) days and no more than ten (10) days before beginning. The phone number for this utility is (302) 241-7777.
- B. Remove and dispose of any existing underground utilities that are to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2 FILL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavation.
- B. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.
- C. Topsoil: Original surface, friable loam topsoil of uniform quality, free from heavy clay, coarse sand, stones over two (2) inch, lumps, frozen clods, plants, roots, sticks, and foreign materials harmful to plant growth.
 - 1. Topsoil shall be reasonably free from two (2) inch or larger fragments of hot-mix, concrete pavement and surface treatment and shall not contain objectionable plant materials, or vegetable debris undesirable or harmful to plant life.
 - 2. Topsoil shall be reasonably free of noxious perennial weeds or woody vegetation and completely void of Johnson grass (*Sorghum halapense*).
 - 3. The topsoil shall have an acidity range of pH 6.0 to pH 7.5.
 - 4. Topsoil shall contain not less than 2 percent nor more than 30 percent organic matter as determined in accordance with AASHTO T267 test method.
 - 5. The method of testing topsoil shall be in accordance with the requirements of AASHTO T88, Modified, AASHTO T89, Method B; AASHTO T90 and meet the following specified grading:

Sieve Size	Minimum Percent Passing
2 inch	100
No. 4	90
No.10	80

6. Topsoil sand, silt and clay contents shall be as follows:

	Minimum Percent	Maximum Percent
Sand	15	65
Silt	10	60
Clay	5	40

7. Topsoil shall not be delivered until samples have been reviewed by the Engineer.

8. Topsoil shall be secured from areas from which topsoil has not been previously removed either by erosion or mechanical methods, and it shall not be removed to a depth in excess of 6" depth.

The area or areas from which topsoil is secured shall possess such uniformity of material (depth, color, texture, drainage, and other characteristics) as to offer assurance that when removed in commercial quantities, the product will be homogeneous in quantity and will conform to the requirements of these specifications.

Borrow for Embankments and Subgrades: The uses, classification, characteristics, and definitions of terms for borrow materials obtained shall be in accordance with the requirements of AASHTO M 57, Modified; M145, Modified, M146; and M147, Modified. Materials having a dry weight less than 90 pounds per cubic foot, materials with liquid limits in excess of 50 and materials containing detrimental quantities of frozen material, rubbish, boulders in excess of 6" or

matter such as tree roots, sewerage shall be excluded from use. The method of testing materials shall be in accordance with the requirements of AASHTO T 88, Modified; T 90, Modified; and T 99, Method of maximum dry density. In addition to the above requirements, which shall be applicable for use of any type of subgrade construction, the following borrow types shall be subject to the additional requirements:

1. Borrow Type A, bank run gravel slag, quarry waste, stone screenings or other acceptable granular material which has between 95 to 100% inclusive by dry weight passing a 2 1/2" sieve and a maximum of 35% by dry weight passing the No. 200 sieve.

2. Special Fill, Borrow Type B, material shall have 100% by dry weight passing a 3" sieve and a maximum of 10% by dry weight passing the No. 200 sieve.

3. Backfill, Borrow Type C, material shall have between 85 to 100% inclusive by dry weight passing a 1 1/2" sieve and a maximum of 10% by dry weight passing the No. 200 sieve.

4. Borrow material for embankment stabilization shall have 100% dry weight passing a 3" sieve and between 85 to 90% inclusive by dry weight passing the No. 100 sieve.

5. Common Borrow, Borrow Type F, material shall be free of organics, frozen material, rubbish, boulders in excess of 6". Maximum dry weight shall be less than 90 pounds per cubic foot. Borrow Type F shall have a liquid limit greater than 40.

E. Graded Aggregate Base Courses: Coarse crushed stone, crushed slag fragments, or portland cement concrete fragments blended with crushed particles of the same origin.

1. Gradation Requirements as follows in accordance with AASHTO T2 , T27 and T96:

Sieve Size	No. 10 No. 20 No. 100	Percent Passing TYPE A (CR-1)
2-1/2"		100
1-1/2"		—
1"		50 - 80
3/4"		—
No. 4		—

	Percent Passing TYPE B (Crusher Run)
20 - 50	—
10 - 30	100
2 - 20	—
	50 - 95
	20 - 50
	15 - 40
	—
	2 - 20

PART 3 - EXECUTION

3.1 PREPARATION

Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washing, and other hazards created by earthwork operations.

Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Clearing."

C. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Site Clearing" throughout earthwork operations.

D. Provide protective insulating materials, protection burlap, and non-toxic salts against freezing temperatures on exposed subgrade.

3.2 DRAINAGE

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect Program soft soil by determining throughout, and average flow of water to prevent accumulation.

Route surface water away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches for temporary drainage ditches.

2. Install a dewatering system to keep subgrade dry and undisturbed by groundwater from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

A. Explosives shall not be used on this project.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches outside of concrete forms other than at footings.
 - b. 12 inches outside of concrete forms at footings.
 - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
 - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - e. 6 inches beneath bottom of concrete slabs on grade.
 - f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

3.5 EXCAVATION FOR STRUCTURES

Excavate to indicated elevations and dimensions to tolerances indicated on drawings. If applicable, provide excavations at sufficient distance from structures for bracing and retaining concrete formwork, for installing services and other construction and for inspection.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required elevations and grades to leave solid base to receive concrete work.
2. Pile Foundations: Stop excavations 6 to 12 inches above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1/4 inch. Do not disturb bottom of excavations indicated as bearing surfaces.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surface uniformly and parallel to indicated lines, cross-section dimensions, and subgrades.

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated dimensions, lines, and elevations.

Excavate trenches to uniform width to provide clearance on each side of pipe or conduit as indicated on Drawings. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.

Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade. Bell holes shall be provided at each joint to permit proper joint assembly and alignment. Any part of the trench bottom excavated below subgrade shall be backfilled to subgrade and shall be compacted as required to provide firm pipe support.

3.8 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

1. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph.
 2. Proof-roll with a minimum 10-ton static roller or fully loaded, tandem-axle dump truck.
 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.9 UNAUTHORIZED EXCAVATION

Fill unauthorized excavations and foundations of buildings by leveling bottom of excavation of concrete foundation or footing excavation to bottom, without altering top elevation. Clean concrete form with 28-day compressive strength of 2500 psi, may be used when approved by Engineer.

Fill unauthorized excavations under other construction or utility as directed by Engineer.

3.10 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Shape, and shape piles to surface water. Cover to prevent wind-blown dust.
- B. Stockpile soil material away from edge of excavation. Do not pile within 10 feet of remaining

3.11 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing and perimeter insulation.
Survey location of underground utilities from Record Documents.
Testing and inspecting underground utilities.
Remove formwork.
Remove traps and debris.
Remove temporary shoring and bracing and shoring.
Install permanent or temporary horizontal bracing on heavily supported.
- B. Place backfill on subgrades free of standing water, mud, frost, snow, or ice.

3.12 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of standing water, mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings.
- D. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the utility pipe or conduit.

1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit.
2. Coordinate backfilling with utilities testing.

E. Backfill voids with satisfactory soil while installing and removing shoring and bracing.

F. Place and compact final backfill of satisfactory soil to final subgrade elevation.

3.13 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

1. Under grass and planted areas, use satisfactory soil material.

2. Under walks and pavements, use satisfactory material.

3. Under steps and ramps, use engineered fill.

4. Under building slabs, use engineered fill.

5. Under foundations and foundations, use engineered fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 DISTURBED SOIL

- A. Uniformly moist or moderate subgrade and each successive layer of backfill soil layer before placement to within 2 percent of optimum moisture content.

1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost on top.

2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF SOIL BACKFILLS AND FILL

- A. Place backfill and fill soil materials in lifts no more than 8 inches in loose state for materials compacted by heavy compacting equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:

1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
3. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 90 percent.
4. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1 inch.
 - 3. Pavements: Plus or minus ½ inch.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of ½ inch when tested with a 10-foot straightedge.

3.17. SEEDING

Place base course on subgrades free of mud, frost, snow, or ice.

On prepared subgrade, place base course under pavements and where it follows

- 1. Place base course 6 inches or less in compacted thickness in a single layer.
- 2. Place base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.

Compact base course at optimum moisture content to required grades, cross sections, and thickness, not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

- C. The subgrade shall be properly shaped and uniformly and properly compacted in conformity with the lines and grades as shown on the Drawings and/or as established in the field before any base or subbase material is placed. The subgrade shall be free from ruts, large rocks, muck, vegetation, or other materials that would prove detrimental to the road. Depressions that develop during the rolling shall be filled with suitable material and the subgrade shall be rolled until no depressions develop.

- D. Where elevations of the finished roadbed section results in a subgrade of unclassified soil, the Engineer may require the Contractor to remove the suitable materials and backfill to the finished roadbed section with approved material. The Contractor shall conduct his operations in such a way that the Engineer can obtain necessary cross-sectional measurements before the backfill is placed.

- E. As directed by the Engineer, test roll the prepared subgrade with the weight of any base or subbase material.

- F. Test roll with self-propelled equipment of adequate size, type, and weight to reveal any soft, yielding, or spongy areas.

- G. If the test rolling shows the subgrade to be unstable, scarify, disc, aerate, or add moisture and recompact the subgrade to the extent that when retested by the above methods it will be stable, the cost of which will be at the Contractor's expense.

- H. If, in the opinion of the Engineer, there are areas to be removed or undercut, they may be ordered excavated and replaced; however, as determined by the Engineer, areas which become soft, or spongy due to the Contractor's methods of operation shall be removed and/or repaired at the Contractor's expense.

- I. The subgrade must be maintained in such condition that it will drain. Prior to the formation of the final subgrade or of the cutting of any box section in which the subbase or base will be placed, all

- J. side ditches parallel to the center line of the project shall be cut to their plan gradient. Temporary ditches permitting drainage from box sections to side ditches shall be provided at intervals as required. All facilities necessary for complete drainage of the construction areas shall be provided and maintained by the Contractor.
- K. In no case shall vehicles be allowed to travel in a single track and form ruts in the subgrade, and if any sharp irregularities are formed the subgrade shall be scarified and recompacted.
- L. The graded aggregate base course as spread shall be well graded, have no pockets of fine material, and be so handled that there will be no segregation of fine or coarse particles. No base course material shall be spread more than 1,000 feet in advance of rolling and filling, except by written permission by the Engineer. No materials shall be placed adjacent to structures until they have been set to the required grade and alignment.
- M. The graded aggregate base course shall be rolled with a self-propelled roller weighing not less than ten (10) tons or approved vibratory equipment may be used. The rolling shall begin at the edges of the material and course the roller shall run forward and backward along the edge parts of the material and the shoulder. The roller shall run forward and backward along the edge until the shoulder and course material are bound together firmly. When the soils have been firmly rolled the rolling shall progress gradually toward the center, parallel with the center line of roadway uniformly lapsing each preceding track and covering thoroughly the entire surface with the roller wheels and continuing until the entire surface does not appear any way ahead of the roller.
- N. The development of a spongy condition in the rolling process will justify either a discontinuance of the rolling for a period of time sufficient to permit the drying of the subgrade, or the complete removal of the base course and a treatment of the subgrade, all of which will be done under the direction of the Engineer.
- O. After the remaining material has been thoroughly rolled it may be necessary to apply screenings over the surface in such amounts as will completely fill the interstices of the rolled material.
- P. If any of the material for each course have been found with screenings, the premixed material shall be sprinkled with an approved sprinkling device. The sprinkling and rolling shall be continued and additional screenings applied where necessary until the course material is well bonded and firmly set. The quantity of screenings and water necessary for each course shall be determined by the Engineer. In no event shall the screenings remaining on the final surface be of such thickness as to be picked up by roller wheels. The finisher for the base course shall be a track-coater. At all times the rolling shall be at the sides overlapping the shoulders and progress toward the center, thoroughly covering the entire surface with the roller wheels.
- Q. Should the subgrade become wet and mixed through the premixed base course material, the Contractor shall, without additional compensation, remove the mixture, reshape and compact the surface, and place the materials removed in a separate area which shall be rolled, broomed, and filled until compacted satisfactorily and uniformly with the surrounding surface.
- R. The finished surface of the base course shall not vary from that required on the plans by more than 1/2" when tested with a 10' straightedge applied to the surface parallel to the center line of the pavement and with a template cut to the cross-section of the roadway and applied to a transverse direction. Such portions of completed base course which are defective, or which do not comply in all respects with the requirements of the Contract Documents, shall be taken up, removed, and replaced with a suitable material, properly laid in accordance with the Contract Documents. The transverse template shall be equal in length to the full width of the roadway, except the template lengths may be limited to a 24' maximum. The Contractor shall designate one employee whose duty it will be to perform the checking operation as required.

3.18 FIELD QUALITY CONTROL

- A. Testing Agency: The Contractor shall engage a qualified independent geotechnical engineering testing agency at Contractor's expense to perform field quality-control testing. Upon receipt, Contractor shall furnish test results to the Owner.
- B. Testing agency shall inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the locations and frequencies directed by the Engineer.
- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.19 PROTECTION

Protecting Graded Area: Protect newly graded areas from traffic, freezing, and erosion. Keep free of wash and debris.

Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or when they lose compaction due to subsequent construction operations or weather conditions.

- 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.

- C. Where surface is damaged before Project completion, remove, replace, and backfill with additional soil material, compact, and reconstruct surface to meet specified tolerances. Restore appearance, quality, and condition of finished surface to match adjacent work, and eliminate evidence of restoration to create best possible appearance.

3.20 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, wash, and debris, and legally dispose of off Owner's property.

SECTION 02300

SECTION 02741 - HOT-MIX ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Hot-mix asphalt paving.
2. Hot-mix asphalt patching.
3. Hot-mix asphalt paving overlay.
4. Asphalt surface treatments.
5. Bituminous surface treatment.
6. Pavement marking.
7. Pavement maintenance of existing hot-mix asphalt pavement.

Related Sections include the following:

1. Division 2 Section "Earthwork" for aggregate subbase and base courses and for aggregate pavement shoulders.

1.2 DEFINITIONS

A. Hot-mix asphalt paving terminology: Refer to STM for definition of terms.

B. Deep lift trench repaving shall consist of 8-inches of graded aggregate Type B base course with hot-mix, hot-laid bituminous concrete, Type C compacted to a finished thickness of not less than 2 inches to existing grade. Temporary paving shall be placed as shown on the Drawings on the same day the repaving is made.

C. Deep lift trench repaving shall consist of hot-mix, hot-laid bituminous concrete, Type B compacted to a finished thickness of not less than 8-inches to existing grade as shown on the Drawings.

D. Deep lift repaving shall consist of hot-mix, hot-laid bituminous concrete, Type B compacted to a finished thickness of not less than 2 inches base course, with hot-mix, hot-laid bituminous concrete, Type C wearing surface compacted to a finished thickness of not less than 1 1/4 inches to final grade.

E. Hot-mix trench repaving shall consist of 8-inches of graded aggregate Type B base course with hot-mix, hot-laid, bituminous concrete, Type C compacted to a finished thickness of not less than 2-inches to existing grade in one (1) course or lift as shown on the Drawings.

F. Hot-mix, flexible repaving shall consist of 8-inches of graded aggregate Type B base course with hot-mix, hot-laid bituminous concrete, compacted to a finished thickness of not less than 3-inches to final grade in two courses or lifts as shown on the Drawings. The Contractor may use Type B or Type C, hot-mix for the base course. The wearing surface shall be Type C, hot-mixing having a minimum thickness of 1-1/4 inches.

G. Hot-mix overlay shall consist of one (1) course of hot-mix, hot-laid, bituminous concrete, Type C compacted to a finished thickness of not less than 1 1/2 inches to final grade as shown on the Drawings.

- H. Hot-mix driveway repaving shall consist of 5-inches of graded aggregate, Type B base course with one (1) course of hot-mix, hot-laid, bituminous concrete, Type C, compacted to a finished thickness of not less than 2-inches to final grade as shown on the Drawings.
- I. Pavement-milling shall consist of furnishing a pavement-milling machine and cold milling or planing the existing bituminous concrete pavement at the location and to the depths shown on the Drawings or as directed by the Engineer.

1.3 SYSTEM DESCRIPTION

- A. Provide hot-mix asphalt paving according to materials, workmanship, and other applicable requirements of the State of Delaware Department of Transportation (DeIDOT) "Specifications for Road and Bridge Construction," latest edition and all subsequent addenda thereto.

1.4 SUBMITTALS

Product Data: For each type of product indicated, include technical data and test, physical and performance properties.

- B. Job-Mix Designs: DeIDOT certification of approval of each job mix proposed for the Work.
- C. Qualification Data: For manufacturer.

D. Certificates: For paving mix designed or manufactured.

1.5 ASSURANCE

A. Manufacturer Qualifications: Manufacturer shall be a paving mix manufacturer registered with and approved by DeIDOT.

B. Regulatory Requirements: Comply with Standard Specifications of Delaware Department of Transportation for asphalt paving work.

C. Asphalt-Paving Application: Comply with MSRP, Construction of Hot-Mix Asphalt Pavement, unless more stringent requirements are indicated.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pavement-marking materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
- B. Store pavement-marking materials in a clean, dry, protected location within temperature range required by manufacturer. Protect stored materials from direct sunlight.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp or if the following conditions are not met:

1. Tack Coat: Minimum surface temperature of 60 deg F.

2. Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at time of placement.
 3. Asphalt Surface Course: Minimum surface temperature of 60 deg F at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F for paint, 50 deg F for thermoplastic alkylid type materials, and not exceeding 95 deg F.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.

- B. Aggregates for Hot Mix Bituminous Concrete:

1. Coarse Aggregate: All material retained on the 2.36 mm sieve conforming to the requirements of AASHTO M 80, except for gravel, crushed gravel or crushed concrete shall be used. Percentage of wear, Los Angeles test, shall not be more than 45%.
2. Fine Aggregate: All material passing the 2.32 mm sieve consisting of clean, hard, durable, crushed stone. Conform to DeIDOT Standard Specifications, Section 823, Article 823.03.

- C. Aggregates for Bituminous Surface Treatment:

a. Coarse aggregate shall conform to the following:

1. Coarse aggregate for initial treatment shall consist of crushed slag composed of clean, tough, durable pieces of air-cooled blast furnace slag, reasonably uniform in density and quality and free of glassy particles, coke, dirt or other objectionable matter.

- b. Crushed slag in dry condition shall weigh not less than 1120 kg/cubic meter when tested according to AASHTO T 19 / T 19M, Bulk Method.

c. Coarse aggregate for final treatment may also be crushed stone or crushed gravel weighing not less than 1020 kg/cubic meter when tested according to AASHTO T 19.

d. The soft, crushed stone or crushed gravel shall conform to the grading requirements of Delaware No. 67 or 67A.

e. Coarse aggregate for the two treatments following the initial application shall consist of crushed chips composed of crushed stone, crushed gravel or crushed slag conforming to the requirements of Delaware No. 8.

2. Fine aggregate shall conform to the requirements of AASHTO M 6, fineness modulus 2.3 to 3.1, except the grading requirements shall be:

<u>Sieve Size</u>	<u>Percent Passing</u>
9.5 mm	100
4.75 mm	95 - 100
300 um	5 - 30
150 um	1 - 10
75 um	0 - 4

2.2 ASPHALT MATERIALS

- A. Asphalt Cement: AC 20 with a viscosity grade conforming to AASHTO M 226, Table 2.
- B. Tack Coat: AASHTO M 140 for anionic emulsions or AASHTO M 208 for cationic emulsions.
- C. Asphalt for Bituminous Surface Treatment: RC-70, or CRS-1, for prime coats and RC-250, or CRS-2, for seal coats.
 - 1. Emulsified asphalt shall meet the requirements of AASHTO M140 for anionic emulsions or AASHTO M208 for cationic emulsions.
 - 2. Cutback asphalt shall conform to AASHTO M 81 for rapid-curing (RC) types, and AASHTO M 82 for medium-curing (MC) types.
 - 3. The material used shall be applied within the following temperature limits: RC-70, 80-100°F; RC-250, 100-125°F; CRS-1, 170-140°F; CRS-2, 125-150°F.

2.3 AUXILIARY MATERIALS

- A. Sand: AASHTO M 29, Grade Nos. 2 or 3.
- B. Joint Sealant: AASHTO M 301 or AASHTO M282, hot-applied, single-component, polymer-modified bituminous sealant.
- C. Pavement Marking Paint: Latex waterborne emulsion road marking paint, ready mixed, conforming to ASTM D 1952, with a drying time of less than 30 minutes. Color: white, yellow or blue as indicated.
- D. Alkyd Type Thermoplastic Pavement-Marking Material: Thermoplastic material homogeneously composed of pigment, filler, resins, and glass reflectorizing spheres, tested in accordance with AASHTO T 250 and M 249, or with appropriate method in FS 141C. Conform to DelDOT Standard Specifications, Section 748.
- E. Glass Spheres: AASHTO M 249, Type 1.

2.4 HOT MIX BITUMINOUS CONCRETE MIXES

- A. Job Mix Formulas A, B, C, D and E: shall comply with the following requirements:
 - 1. The general composition limits prescribed hereunder are master ranges of tolerance to govern mixtures made from raw materials conforming to these specifications. The composition limits are maximums and minimums in all cases. Closer control may be required for job materials used for specific projects according to the job mix formula. No work within State rights-of-way shall be started, nor any mixture accepted until the proposed job mix formula has been approved by DelDOT. The Contractor shall submit a written proposal To DelDOT indicating the single definite percentage for each sieve fraction for aggregate and for the asphalt in the mix. The proposal shall also indicate the temperature at which the Contractor shall furnish the mixture at the plant. DelDOT approval of the job mix formula shall bind the Contractor to furnish paving mixtures that not only meet the master ranges, but also meet the exact formula set for the Project, within the allowable tolerances. Percentages for aggregate are based on total aggregate weight; percentages for asphaltic cement are based on the total weight of the mix.

2. General uses for Job Mix Formulas
 - a. Type A - Open plant mix base course
 - b. Type B - Dense graded base and binder course
 - c. Type C - Dense graded surface course
 - d. Type D - Fine, dense graded surface course
 - e. Type E - Curb mix

3. Gradation requirements for Job Mix formulas A, B, C, D, and E:

<u>Sieve Size</u>	<u>Type A %</u>	<u>Type B %</u>	<u>Type C %</u>	<u>Type D & E %</u>
2 1/2"	100.0	-	-	-
2"	90-100	-	-	-
1 1/2"	80-90	-	-	-
1 1/4"	-	100.0	-	-
1"	75-85	95 - 100	-	-
3/4"	-	75 - 95	-	-
1/2"	60-65	50 - 80	100.0	-
3/8"	-	45 - 70	85-100	100.0
No. 4	20-45	30 - 50	50-75	80-100
No. 8	-	22 - 38	33-59	70-90
No. 30	-	9 - 23	14-32	30-55
No. 50	-	-	7-25	15-40
No. 200	2-10	3 - 10	3-10	5-10
C. %	2.0-4.0	3.5 - 5.5	4.5 - 6.5	6 - 8.5
mp.	225-275	275 - 325	275 - 325	275 - 325

NOT FOR BIDDING

	<u>Type A</u>	<u>Type B</u>	<u>Type C</u>	<u>Types D & E</u>
Air Voids, % (Compacted Specimen)	11.5	13.0	16.0	18.0
Stability, % (Minimum)	4	5.3	6.5	7.2
Flow, 0.075 mm	10 - 20.0	10 - 20.0	10 - 20.0	10 - 20.0
VMA (Voids in Mineral Aggregate) % (Minimum)	11.5	13.0	16.0	18.0

PURPOSES

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.

- C. Proceed with paving only after unsatisfactory conditions have been corrected.

3.2 PAVEMENT MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before pavement milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
 - 1. Mill to the depth indicated on the drawings.
 - 2. Mill to a uniform finished surface free of gouges, grooves, and ridges.
 - 3. Control rate of milling to prevent tearing of existing asphalt course.
 - 4. Repair or replace curbs, manholes, and other construction damaged during pavement milling.
 - 5. Excavate and trim unbound aggregate base course, if encountered, and remove material separately from milled hot-mix asphalt. Keep milled pavement surface free of loose material and dust.

3.3 PAVING

- A. Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound aggregate base course to form new base grade.
- B. Concrete Pavement: Break cracked slabs and, as required, to reset concrete pieces firmly.
 - 1. Pump out unreinforcing asphalt under roofing slabs until slab is leveled or, if necessary, crack slab into pieces and roll to reset pieces firmly.
 - 2. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompact existing unbound-aggregate base course to form new surface.
- C. Tack Coat: Apply only to vertical surfaces by cutting or projecting new, loose asphalt paving aggregate at 0.05 to 0.15 gal/sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings.
 - 3. Remove spillages and clean affected surfaces.
- D. Patching: Partially fill excavated pavements with hot-mix asphalt base mix and, while still hot, compact. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

3.4 REPAIRS

- A. Leveling Course: Install and compact leveling course consisting of hot-mix asphalt surface course to level sags and fill depressions deeper than 1 inch in existing pavements.
 - 1. Install leveling wedges in compacted lifts not exceeding 3 inches thick.

- B. Crack and Joint Filling: Remove existing joint filler material from cracks or joints to a depth of 1/4 inch.
1. Clean cracks and joints in existing hot-mix asphalt pavement.
 2. Use emulsified-asphalt slurry to seal cracks and joints less than 1/4 inch wide. Fill flush with surface of existing pavement and remove excess.
 3. Use hot-applied joint sealant to seal cracks and joints more than 1/4 inch wide. Fill flush with surface of existing pavement and remove excess.

3.5 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.

Prime coat apply uniformly over surface of compacted unbound aggregate base course at a rate of 15 to 0.50 gal./sq. Yd. Apply enough material to penetrate and seal out the floor surface. Allow prime coat to cure 72 hours minimum.

1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.

Protect prime coat from damage until ready to receive paving.

- C. Tack Coat: Apply uniformly to all dry and broom clean surfaces of concrete and bituminous pavement surfaces at a rate of 0.05 to 0.15 gal./sq. yd.

1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
3. Tack coat shall be applied only as far in advance of the hot mix operation as is anticipated for the current day's operation. In residual areas, the tack coat shall be applied only as far in advance of the operation as directed by the Engineer.

3.6 PLACING BITUMINOUS MIXTURES

- A. Prior to the delivery of the mixtures on the job, the underlying course shall have been brought to line, grade, and cross-section, and all excess patching material, joint material, dirt, or foreign material shall be removed. All major cracks shall be cleaned. The mixtures shall be placed only upon a surface which is dry, and only when weather conditions are suitable.
- B. Hot-mix, hot-laid bituminous concrete shall be transported from the mixing plant to the project site in tight vehicles previously cleaned of all foreign materials, and each load shall be covered with canvas or other approved material of sufficient size to protect it from the weather. The cover shall be tightly secured on all sides to prevent loss of heat. No loads shall be sent out so late in the day as to interfere with spreading and compacting the mixture during daylight unless satisfactory artificial light is provided. The mixture shall be delivered at the spreader with a loss of not greater than 20° F from that temperature determined at the plant by the Engineer or his agents.
- C. Each year after September 30th, loads shall be delivered in insulated trucks. The Engineer may permit work to continue when overtaken with sudden rain, up to the amount of material which

may be in transit from the plant at the time, and provided the mixture is within the temperature limits specified.

D. The methods employed in performing the work and all equipment, tools, and machinery used in handling materials and executing any part of the work shall be subject to approval before the work is started and whenever found unsatisfactory, shall be changed or improved as required by the Engineer. All equipment, tools, and machinery used must be maintained in a satisfactory working condition.

E. The bituminous concrete spreading and finishing equipment shall be of an approved, self-propelled type and capable of spreading the mixture true to the line, grade, width, and crown specified. This equipment shall also be provided with means for heating the screened members so that it will prevent the accumulation of bituminous material. All paving materials shall be equipped with automatic grade and slope controls unless approved otherwise in writing by the Engineer. Both grade and slope controls shall be in operation all times. In the event of a mechanical failure of the automatic controls, the Contractor will be permitted to finish the day's work using manual controls. Upon arrival the mixture shall be dumped into the approved mechanical spreader and immediately spread, tamped, and struck off in a uniform layer to the thickness required. Machine methods of spreading and screening will be required unless otherwise permitted.

G. Hand spread with lutes where irregularities or obstacles make the use of pavers impractical. The use of garden rakes shall not be permitted.

H. Contact surface of curbing, gutters, manholes, etc., shall be coated with a thin uniform coat of portland cement or other approved material just before the mixture is placed against said surface.

- I. The contractor shall provide the following:
1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
 2. Place hot-mix asphalt surface course in single lift.
 3. Spread mix at minimum temperature of 250 deg F.

E. In a hot-mix along the line of crown, the crown shall be as indicated on the side of the road, unless otherwise indicated. The paver shall be operated at a speed which will produce a smooth surface free of pulls and ruts in the paving course.

- J. The following instructions shall be followed:
1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt base course before placing asphalt surface course.

K. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

L. The Contractor shall fill low places in the base with a leveling material which shall consist of binder course or surface material of hot-mix bituminous concrete. The locations along the base course to receive this leveling course material, the type of material to be used, and the method to be employed in each case shall be as directed by the Engineer. Hot-mix bituminous concrete shall be placed as directed, around all manholes, catch basins, valves, etc. when they are

adjusted to the proper grade. This material shall be removed if directed and such removal shall be incidental to the work.

- M. After the hot-mix bituminous concrete binder course is placed, it shall not lay exposed for a period longer than ten (10) days. If due to conditions of emergency, more than ten (10) days elapse, an asphaltic tack coat may be required to be sprayed on the binder course so exposed, before placing the wearing course of hot-mix bituminous concrete. There will be no additional compensation for the tack coat.
- N. When placing the hot-mix bituminous binder on wearing courses, one lane shall not be carried ahead of the other a distance greater than one (1) day's run unless approved by the Engineer.
- O. No hot-mix bituminous concrete shall be placed on any frozen surface, when the ambient temperature is below 40° F for wearing course and 32° F for binder course or when the weather conditions prevent the proper handling or finishing of the mixture.

At locations where the hot-mix is to be placed to meet an existing roadway, a tack coat of asphaltic material shall be applied on the prepared areas at the rate of approximately 0.5 gallon per square yard.

3.7 JOINTS

- A. Placing of bituminous concrete shall be as nearly continuous as possible and the roller shall not pass over the unprotected end of the freshly laid mixture except when necessary to form a transverse joint. When necessary to form a transverse joint between old and new pavements or between successive courses work, the joint shall be made by means of placing a 6" wide strip by the roller in the binder course which cuts the edge shall be cut back to its full depth and width on a vertical face to expose a vertical face. In both methods all joints shall be sprayed with an approved asphaltic tack coat material before placing any fresh mixture against the joint.
- B. Longitudinal joints shall be rolled directly behind the laying operation. The first joint shall be true to line and grade and have vertical face. The material being placed in the abutting lane shall be tightly compacted against the vertical face of the previously placed lane. The finishing machine shall be positioned so that in spreading, the material overlaps the edge of the lane previously placed by 1" to 2" and shall be left sufficiently high to allow for compaction. Before rolling, the material overlapping the joint shall be removed in a uniform depth onto the surface of the unrolled lane. When the abutting lane is not placed the same day or the joint is started to traffic, the material shall be carefully trimmed to the same surface with a hand tool and a tack coat of asphaltic tack coat material shall be applied.
- C. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.
 - 1. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
 - 2. Joints in completed surfacing shall be at the lane line
 - 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
 - 4. Construct transverse joints as described in AI MS-22, "Construction of Hot Mix Asphalt Pavements."
 - 5. Compact asphalt at joints to a density within 2 percent of specified course density.

3.8 COMPACTION

- A. Immediately after the bituminous mixture has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling.

- B. The surface shall be rolled when the mixture is in a workable condition and when the rolling does not cause undue displacement, cracking or shoving. All roller marks shall be rolled out.
- C. The number, weight, and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. All rollers shall be approved prior to use and shall be continuously maintained in a satisfactory working condition and shall bear the manufacturer's name plate on which shall be stamped the model number and the weight without ballast. Each roller shall be operated by a competent and experienced roller operator. All rollers shall be kept in good condition and shall weigh not less than 250 pounds per inch width of tread.
- D. The sequence of rolling operations and the selection of roller types shall provide the specified pavement density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:

92 percent of reference maximum theoretical density according to AASHTO T 99 for surface courses
2. 90 percent of reference maximum theoretical density according to AASHTO T 99 for base courses.

- E. Delays in rolling freshly spread mixtures shall not be permitted. Rolling shall start longitudinally at the sides and proceed toward the center of the work, overlapping on successive trips by at least one-half the width of the roller. Alternate trips of the roller at all times shall be slow enough to avoid displacement of the hot mixtures, and any displacement occurring as a result of the operation of the roller, or any other cause, shall at once be corrected by the use of lumps and fresh mixture when required. To prevent segregation of the mixture to the wheels of the roller, the roller shall be kept properly maintained, but excess water shall not be permitted.
- F. In all cases, thorough compaction must be secured by means of approved tampers, and at all contacts of this character the joints between these structures and the mixture must be effectively sealed.

- G. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; bevel must be thorough.

- H. Repairs: Any mixture which becomes loose and broken, mixed with dirt, or in any way defective shall be removed and replaced with fresh hot mixture, which shall be immediately compacted to conform with the surrounding area. Areas showing an excess of asphalt cement shall be removed and replaced with a fresh hot mixture, which shall be immediately compacted to conform with the surrounding area. Areas showing an excess of asphalt cement shall be removed and replaced at the Contractor's expense.

- I. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm
- J. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked

3.9 INSTALLATION TOLERANCES

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances:

1. Base Course: Plus or minus ½ inch.
2. Surface Course: Plus 1/4 inch, no minus.

B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:

1. Base Course: 3/8 inch.
2. Surface Course: 1/4 inch.

3.10 ASPHALT CURBS

A. Construct hot-mix asphalt curbs over compacted pavement surfaces. Apply a light tack coat unless pavement surface is still tacky and free from dust. Spread mix at minimum temperature of 250 deg F.

Asphalt Mix: Job mix formula Type E

Place hot-mix asphalt curb cross section indicated or, if not indicated, to local standard slopes, by machine or by hand in wood or metal forms. Tamp hand-placed materials and screed to smooth finish. Remove forms after hot-mix asphalt has cooled.

3.11 SURFACE TREATMENTS

A. Fog Seal: Apply fog seal at a rate of 0.10 to 0.15 gal/sq. yd. on existing asphalt pavement and on concrete. Use a fine sand, mostly in wet areas, covering edges of fog seal.

B. Slurry Seal: Apply slurry coat to uniform thickness according to ASTM D 3369 and allow to

1. Roll slurry seal to remove ridges and provide a uniform, smooth surface.

3.12 PAVEMENT MARKING

A. Do not apply pavement-marking paint until day colors, and placement have been verified with engineer.

B. Sweep and clean surface to eliminate loose material and dust.

C. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.

1. Broadcast glass spheres uniformly into wet pavement markings at a rate of 6 lb/gal.

3.13 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and to prepare test reports.

1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements.

- B. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.
- D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- E. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to AASHTO T 168.

- 1. Laboratory calculation of maximum theoretical voidless density will be determined in accordance with AASHTO T 209 from samples of the hot-mix asphalt-paving mixtures

Field density of in-place compacted pavement shall be determined by nuclear method according to ASTM D 2958 and correlated with ASTM D 1588 or ASTM D 1726.

Regrade and replace or install additional hot-mix asphalt where test results indicate requirements are not met. Regrade and replace or install additional hot-mix asphalt where test results indicate that it does not comply with specified requirements.

3.14 DISPOSAL

- A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an approved landfill.

Do not allow excavated material to accumulate on-site.

END OF SECTION 02741

**NOT FOR
BIDDING
PURPOSES**

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

- 1. Trench Drain

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic fly ash and pozzolona, and ground glass blast-furnace slag and silica fume; subject to compliance with requirements.

1.3 SUBMITTALS

Product Data: Provide type of product indicated.

- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

Indicate amounts of material to be ordered for labor addition at Project site.

- C. Reinforcement Shop Drawings: Placing drawings for detail, fabrication, cutting, and placement. Include bar sizes, lengths, material, lap bar, hook, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, spacing, hook facing, and details for concrete reinforcement.

- D. Material Certificates: For each of the following, signed by manufacturers:

- 1. Cementitious materials.
- 2. Concrete mixture.
- 3. Steel reinforcement and accessories.
- 4. Welders.
- 5. Cast-in-place concrete.
- 6. Embedment.
- 7. Formwork.
- 8. Premix joint filler.
- 9. Joint-filler strips.

- E. Field quality-control test and inspection reports.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.

- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

- 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

- C. Welded Wire Reinforcement: ASTM A 185 and ASTM A82, plain, fabricated from No. 10 gauge wire into flat sheets. Individual wires on 6-inch centers in each direction as required by the drawings.
- D. Welded Wire Reinforcement for concrete pavement construction: ASTM A 185 and ASTM A 82, fabricated from cold drawn steel wire into flat sheets. Furnish with dimensions, spacing and wire sizes as specified.

2.3 REINFORCEMENT ACCESSORIES

- A. Accessories include all spacers, chairs, bolsters, ties, other devices necessary for properly placing, spacing, supporting and fastening reinforcement in place. Conform to requirements of The Concrete Reinforcing Steel Institute "Manual of Standard Practice of Reinforced Concrete Construction".
 - 1. Metal Accessories: Galvanized after fabrication or plastic protected where legs will be exposed to weathered surfaces.

2.4 CONCRETE MATERIALS

Certainious materials use the following cementitious materials of the same type, brand and source throughout the project:

- 1. Portland Cement: ASTM C 150, Type I or Type IA, gray. Use only one brand of any one type for exposed surfaces.

- B. Weight Aggregate: ASTM C 33 coarse aggregate or better, good quality. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: 3/4 inch nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

- C. Lightweight Aggregate: ASTM C 330, 5/8 inch maximum nominal maximum aggregate size.

- D. Water: Reasonably free of salts, acid, alkali, sugar, oil, or other deleterious substances. The finished product must comply with ASTM C 94.

- 1. Water known to be of potable quality may be used without further testing.
- 2. pH: 4.5 to 8.5.

2.5 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
 - 1. Products:
 - a. Sika Corporation; Sika AER
 - b. Master Builders; MBOR
- B. Chemical Admixtures: ASTM C 494. Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: Type A.

2. Retarding Admixture: Type B.
3. Water-Reducing and Retarding Admixture: Type D.
4. Accelerating Admixtures: Type C.
5. Water Reducing and Accelerating Admixtures: Type E

C. Water Reducing Admixtures: ASTM C 494

1. Products:
 - a. Sika Corporation: Plastiment
 - b. Master Builders: Masterpozzolith

2.6 WATERSTOPS

- A. Flexible PVC Waterstops: for embedding in concrete to prevent passage of fluids through joints. Factory fabricate corners, intersections, and directional changes. Compound as necessary to meet the manufacturer's requirements. Do not incorporate reclaimed PVC from any source in the compounding.

- Manufacturers:
1. Sika Greenstreak
 2. Pro Seal Flat, dumbbell with center bulb.
 3. Extruded material: Dense, homogeneous and free from porosity or other imperfections which could affect its durability of performance.

2.7 VAPOR BARRIERS

- A. Vapor Barrier: Polyethylene film, less than 10 mils thick. Include manufacturer's recommended resin or pressure-sensitive joint tape.

2.8 CURING MATERIALS

- A. Retaining Compound: AASHTO M 163 Polyethylene film and waterproof paper.
1. Waterproof Paper: The name of the manufacturer shall be marked or imprinted clearly on the paper for proper identification and it shall retain 90% of the mix water.

- B. Curing Compound: ASTM C 309 Compatible with subsequent finishing compounds.

Available Products:
a. One-Coat Liquid Membrane Curing Compound
b. Liquid Membrane Curing Compounds: AASHTO M 48 for Type I, Class A or B, White
c. Cementitious. Acceptance for continued use shall be based on satisfactory field performance.

2.9 RELATED MATERIALS

- A. Non-bituminous Expansion Joint Filler: AASHTO M 153, Type I or Type III, unless otherwise specified on the Drawings or in the special provisions.

1. Types I Joint Filler: Preformed strips of a durable elastic, sponge rubber compound. Unless otherwise specified, the sponge rubber shall have a cement-gray color to blend with concrete in appearance.
2. Type III Joint Filler: Preformed strips of clean, granulated cork particles securely bound together by a synthetic resin of an insoluble nature.

- B. Bituminous Expansion Joint Filler: AASHTO M 33, consisting of a bituminous mastic composition formed and encased between two (2) layers of bituminous impregnated felt.

- C. Dovetail Anchor Slots: Type 24-gauge galvanized steel sheet, minimum, with fillers. Standard types to engage anchors supplied.
- D. Rubber Joint Sealant: The sealant shall be a multi-part chemically curing polyurethane sealant which meets or exceeds the curing requirements of Federal Specification TT-S-00227E (3) and TT-S-00230C (2) Nonsag type, Class A, compounds resistant to 50 percent total joint movement. The color shall be gray to match concrete. A primer shall be used as recommended by the sealant manufacturer. A bond breaker such as masking tape, polyethylene film, or backing rod as supplied by the manufacturer shall be used at the bottom of the joint.
 - 1. Manufacturer: Fox Industries, FX-570/571.

2.10 CONCRETE MIXTURES, GENERAL

A. General:

- 1. Preparation of mixtures: Each type and class of concrete proposed on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
 - a. Use a certified independent testing agency for preparing and reporting proposed mixture designs based on laboratory mixture proportions.
- 2. Admixtures: Use admixtures according to manufacturer's written instructions.
 - a. Use water-reducing, high-range water-reducing, and plasticizing admixtures in concrete, as required, for placement and workability.
 - b. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - c. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial concrete, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.5.

B. Mix Proportions: The composition of the mixtures and the air content shall be as established by ASTM C94 and shall conform to the following:

Class of Concrete	4,500	4,000	3,000
Minimum 28 Day Compressive Strength (PSI)	4,500	4,000	3,000
Cement Content:			
Minimum Sacks/CY	7-1/2	7	6
Minimum Pounds/CY	705	658	567
Water-Cement Ratio	0.45	0.45	0.5
Percent Entrained Air	5-7	4-7	5
Slump (Inches)	2-4	2-4	

- 1. Concrete exposed to weather and exterior surfaces of grade shall contain 4% to 7% entrained air as indicated in Chapter 3, unless otherwise specified. Use of air-entraining admixtures shall be normal Portland cement or an air-entraining Portland cement. Measure air content at point of discharge at job site.
- 2. Concrete exposed to weather shall be made with not more than 6 gallons of water per bag of cement, including the free moisture in the aggregate.

C. Selection:

- 1. Concrete not in direct contact with potable water or sewage shall be Class C in accordance with the mix compositions in this section, unless otherwise shown or noted.
- 2. Concrete in direct contact with potable water or sewage shall be Class B unless otherwise shown or noted.

2.11 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to ACI 315.

2.12 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C94 and furnish batch ticket information to engineer before unloading at the site.
1. Batch delivery ticket: Indicate the producer's name, delivery date, time of loading, time delivered, truck number, quantities of each material in the batch, and information necessary to calculate the total mixing water added by the producer. Total mixing water includes free water on aggregates, water and ice batched at the plant, and water added by the truck operator.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94 Chapter 7 ACI 301. Mix concrete materials in appropriate drum-type batch machine mixer. Furnish batch ticket for each batch discharged and used in the work.
- C. Volumetrically Batched Concrete: Conform to ASTM C 685.

1. Adhere to aggregate sizes, conforming to the specified maximum size of aggregate. Alternate with the requirements stipulated in Paragraph 5.3.2 of ASTM C 685 being called out.
3. The supplier will be required to have one person at the job site to operate the mixers. It shall be the responsibility of this person to set, record and maintain the sealant of all gauges on mixers at the job. No other personnel will be allowed to perform this function.

2.13 GROUT

Non-shrink, non-sag grout in accordance with ASTM C-110 (Grade 1).
Produced by
a
ka Corporation, Sika, about 212, high performance, self-consolidating grout.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 308.
- B. Lay out forms for poured concrete to the shape, lines, and dimensions indicated on the drawings. Exercise particular care in the layout of forms to avoid necessity for cutting or concrete after it is in place.
- C. Construct forms to be straight, true, plumb, and square within a tolerance horizontally of one in 200 and a tolerance vertically of one in 500.
- D. Nail Plywood Panels directly to studs and apply in a manner to minimize the number of joints.
1. Panel joints: Tight butt joints with all edges true and square.
- E. Construct footing forms of wood unless otherwise specifically approved by the Engineer.
1. Upon approval by the Engineer, side forms for footings may be of earth provided the soil will stand without caving and the sides of the bank are made with a neat cut to the minimum dimensions indicated on the Drawings. Make all necessary provisions to prevent cave-ins during placement of concrete.
- F. Set all required steel frames, angles, grills, bolts, inserts, and other such items required to be anchored in the concrete before the concrete is placed.

- G. Provide openings, chases, offsets, recesses, anchorage, blocking, and other features as shown or required in the work. Perform all forming required for work of other trades and do all cutting and repairing of forms required to permit such installation. Consult with other trades as required relative to provision for openings, chases, and other items in the forms.
- H. Brace and tie forms together so as to maintain position and shape and to ensure safety to personnel.
 - 1. Construct bracing, supporting members, and centering of ample size and strength to safely carry, without excessive deflection, all dead and live loads to which they may be subjected.
 - 2. Properly space the forms apart and securely tie them together, using metal spreader ties that give positive tying and accurate spreading.

3.2 EMBEDDED ITEMS

Place and secure all other embedded items for adjacent work that is attached to or supported by cast-in-place concrete according to ACI 301. Slots install in face of all concrete against masonry will be installed at 2'-0" on centers horizontally as required by details and job conditions. No in-wall slots where masonry will abut concrete.

3.3 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the work that does not support weight of concrete may be removed after curing (not less than 50 deg. F for 48 hours after placing concrete, concrete is hard enough to be managed by form-removal operations and curing and protection operations are complete). Leave formwork for beams, soffits, joists, slabs and other structural elements that support weight of concrete in place until concrete has achieved at least 75 percent of its 28-day design compressive strength.
 - 2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
- B. Reuse of forms shall be subject to advance approval of the Engineer. Reuse of forms shall in no way delay or change the scheduled placement of concrete from the scheduled date if all forms were never reused. Reuse of forms shall not compromise structural integrity of the forms or be acceptable for use on concrete.

3.4 VAPOR BARRIERS

- A. Plastic Vapor Barriers: Place, protect, and repair vapor barriers according to ASTM E 1643 and manufacturer's written instructions.
 - 1. Lap joints 2 feet and seal with manufacturer's recommended tape or mastic. Turn up on walls approximately 4-inches, stretch and weight edges and laps to maintain their positions until concrete is placed.
 - 2. Provide wood runways for wheeled equipment for transporting concrete. Do not displace film.
 - 3. Repair all holes in vapor barrier prior to placement of concrete.

3.5 STEEL REINFORCEMENT

- A. General: Comply with ACI 301.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

- B. Fabricate all reinforcement in strict accordance with shop drawings which have been reviewed by the Engineer. Do not use bars with kinks or bends not shown on the Drawings or on the reviewed shop drawings.
- C. Do not bend or straighten reinforcement bars in a manner that will injure the material. Bond all bars cold.
1. Stirrups and Ties: Bend around a pin having a diameter not less than two (2) times the minimum thickness of the bar.
 2. Other bars and hooks: Bend around a pin having a diameter not less than six (6) times the minimum of the bar.
- D. Before the start of concrete placement, accurately position, support and secure reinforcement against displacement using concrete blocks, metal chairs or spacers or by metal hangers. Locate and support reinforcement with bar supports to maintain minimum concrete cover.
1. Clear space between bars: Not less than 1-1/2 times the normal diameter of round bars.
 2. In no case shall the clear space be less than 1 inch or less than the maximum size aggregate.
 3. Minimum concrete covering the reinforcement:
 - a. Concrete below ground deposited against forms: 1/2 inch
 - b. Concrete deposited against earth: Three (3) inches
 - c. Concrete elsewhere: As indicated on the Drawings or otherwise approved by the Engineer.
- E. Splicing:
1. Horizontal bars:
 - a. Lap splice: Lap splice bars in horizontal members with minimum lap at splices sufficient to develop the strength of the bars.
 - b. Bars may be welded together at splices except at points opposite of the member, at which points reserve the clear space described above.
 - c. Whenever possible, stagger the splices of adjacent bars.
 - d. Splice 36 bar diameters minimum.
 2. Wire fabric: Make all splices in wire fabric at least 1-1/2 meshes wide. Other splices: Make or fabricate other splices that are indicated on the Drawings which have been reviewed by the Engineer.
- F. Anchor all steel reinforcement so positioned before the concrete is placed.
- G. If the front conduits, piping, inserts, sleeves or any other items interfere with placement of concrete as indicated on the Drawings or otherwise reviewed and approved by the Engineer to determine a new procedure before placing concrete.

3.6 JOINTS

- A. General: Construct joints in accordance with Chapter 6, ACI 301.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations as approved by Engineer prior to starting concrete placement.
1. At construction joints, erect a temporary wood bulkhead so that the jointing will follow a vertical plane perpendicular to the direction of the main reinforcement. To this bulkhead fasten a wood strip 2" thick and of width equal to one-third the depth of the concrete slab to form a tongue and grooved joint.
 2. Key and waterstop construction joints below liquid levels.
 3. Space vertical joints in walls at thirty (30) feet, maximum. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.

- C. Contraction Joints in Slab-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

3.7 WATERSTOPS

Waterstops: Install continuous and weld at butt joints and intersections in strict accordance with manufacturer's written instructions.

3.8 CONCRETE PLACEMENT

- A. Place concrete in accordance with ACI 301 and ACI 304. Do not place concrete until forms and reinforcement are inspected by the Engineer. Notify Engineer of all concrete pours at least 24 hours prior to pouring concrete.
- B. Obtain mix and concrete in accordance with ASTM C 394 unless otherwise specified or permitted by the Engineer.
- C. Concrete is to be placed as possible consistent with good workmanship, after evaluating the maximum recommended slump.
- D. Consolidate concrete in continuous operation within limits of contraction joints, until placement of a panel or section is complete.
1. Do not use retempered concrete or concrete that has been contaminated by foreign materials.
 2. Do not use water at any time that will be properly mixed with the concrete. In all cases, a slab length four greater than 10 feet shall be placed without construction joints.
 3. Top surface shall be free of the rock, and the surface shall be floated as necessary.
 4. Speed slab surfaces with a straightedge and strike off to correct deviations.
 5. Slab depressions as required for the finished grade shall be formed on the slabs.
 6. Plane floor slabs to a Class A tolerance, that is, true planes within 1/8" in 10 feet, as determined by a 10 foot straightedge placed anywhere on the slab in any direction.
 7. Slope surfaces uniformly to drains where required.
- E. Do not use concrete with a placing temperature that will cause difficulty from loss of slump, flash set, or cold joints. Do not allow concrete temperature to exceed 90 degrees F during placement and use all means necessary to avoid drying concrete prior to finishing operations. Provide and use all required windbreaks, sunshades, fog sprays, and other devices to protect the concrete.
- F. Chuting, Pumping, and Pneumatically Conveying Concrete: Use only equipment of such size and design as to ensure a practically continuous flow of concrete at the delivery end without loss or separation of materials.

G. Cold-Weather Placement: Comply with ACI 306.

1. Cover and insulate concrete to protect concrete and the ground underneath slabs and footings from freezing.

H. Hot-Weather Placement: Comply with ACI 305.

1. Provide extra protection against moisture loss by keeping all exposed concrete surfaces constantly wet as specified and by keeping the forms continuously wet for the entire curing period.

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: Comply with Chapter 10, ACI 301.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth Rubbed Finish: Comply with Chapter 10, ACI 301.

1. Apply to concrete surfaces exposed to public view or contact with liquids. Level to be finished.

3.10 FINISHING FLOORS AND SLABS

A. General: Comply with Chapter 11 of ACI 301.

1. Monolithically cast all concrete. Do not sprinkle dry cement on surfaces of dry concrete. Do not apply curing compound to concrete surfaces until the concrete has gained sufficient strength. Do not apply curing compound to concrete surfaces until the concrete has gained sufficient strength. Do not apply curing compound to concrete surfaces until the concrete has gained sufficient strength. Do not apply curing compound to concrete surfaces until the concrete has gained sufficient strength.

B. Float Finish: Consolidate surface with power-driven floats or by hand tamping. If area is small or congested, use trowel. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces of all interior slabs.

C. Clean exposed surfaces. Remove finishes, form oil stain, and other discolorations. Clean surfaces by brushing with mild detergent and water.

D. Cut off floor all rebar wires, and fasteners. Leave all surfaces smooth. Remove metal splatters or exposed concrete by chipping or chapping on outside wall surfaces and pointing up and rubbing the resulting pockets to match the surrounding area.

E. Flush all holes resulting from the use of spreader rods and sleeve nuts using water, and then solidly pack throughout the wall thickness with cement grout applied under pressure by means of a grouting gun.

1. Grout: One (1) part Portland cement to 2-1/2 parts sand. Apply immediately after removing forms.

F. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance with a smooth, dense and plane surface.

1. Apply a trowel finish to surfaces of all interior slabs.
2. Apply a curing and sealing compound compatible with finish.
3. Steel trowel finish after sheen has disappeared from the surface.

- G. Trowel and Fine-Broom Finish: Apply a first Trowel Finish to surfaces of exterior stairs, exterior slabs subject to foot traffic, and entrance slabs. After three (3) trowelings, while concrete is still plastic, slightly scarify surface with a fine broom.
 - 1. Provide stairs and slabs with sufficient pitch to shed water.

3.11 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

3.12 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Exterior Slab Surface: Begin curing immediately after finishing concrete. Cure formed surfaces including floors and slabs and other surfaces. Use fogging until a curing membrane has been installed.
 - 1. Apply a fog mat above the finished concrete surface using nozzles to keep the air humid to prevent loss of moisture from the concrete surface. The fogging produce an appearance of wet sheen on the concrete but in no case shall allow a concentration of water in one place. Continue fogging until a membrane has been installed.
 - 2. Curing Membrane:
 - a. As possible after finishing interior slabs, install the curing membrane. Lap in joints six (6) inches and seal joints together. Use weight down the covering to prevent wind from the wind. Construct seals to achieve a watertight seal over the entire slab.
 - b. Unless otherwise directed by the Engineer, keep the curing membrane in place and intact for at least ten (10) days after placement of concrete. Make repairs and repairs necessary to the proper

3.13 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas in accordance with Chapter 9, ACI 301.
- B. Immediately after forms and curing membrane have been removed, inspect all concrete surfaces and patch all pour joints, voids, rock pockets, form tie holes, and other imperfections before the concrete is thoroughly dry. Do not notch concrete until it has been inspected by the Engineer.
- C. Patching Mortar: One part cement to three parts water, to a consistency as dry as possible within the requirements of handling. Install by ramming it into place.
- D. Repairing Formed Surfaces: Chip away concrete to a depth of about one inch, leaving edges perpendicular to the surface. Wet the area to be patched along with a space of at least six (6) inches wide around it to prevent water from being absorbed out of the mortar. Coat the area to be patched with a cement wash consisting of neat cement and solution of one part "Konsrest", or

equal, to four parts of water. Apply patching mortar immediately. Screed off the patch so as to leave the patch slightly higher than surrounding surface. Leave undisturbed for a period of one or two hours to permit initial shrinkage, and then final finish by matching the patch to adjacent surfaces and keep it wet for at least seven (7) days. Provide protective covering.

- E. Repairing Major Surface Defects: If the defects are serious or affect the strength of the structure, or if patching does not satisfactorily restore the quality and appearance of the surface, the Engineer may require "cement gun concrete" to be used or the concrete to be removed and replaced complete in accordance with the provisions of this Division, all at no cost to the Owner.

3.14 FIELD QUALITY CONTROL

- A. Notify Engineer when all the provisions of this section are met and the Contractor is ready to place concrete.

- 1. No concrete shall be deposited before the Engineer has reviewed the reinforcing and given permission to which inspection permits to proceed in any way. Release the Contractor of the responsibility for proper placement of reinforcing and placement of concrete, and the responsibility for adherence to the requirements of the Contract Documents.

- 2. Notify the Engineer at least 24 hours in advance of all concrete pourings.
Testing and Inspecting: The Contractor shall engage a qualified independent testing and inspecting agency at Contractor's expense to perform tests and inspections and to submit reports. Upon receipt, Contractor shall furnish test results to the Owner.

- C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 31 shall be performed according to the following requirements:

- 1. Testing Frequency: Obtain six (6) composite specimens from the first batch. Obtain at least six (6) composite specimens for each 25% cubic yard portion of each concrete mixture placed each day. Samples shall be taken in accordance with ASTM 172 and shall be molded in accordance with ASTM C 31.
a. Sample: ASTM C 31, one point placement for each composite sample.

- 2. Slump Limit: 2 inches minimum and 4 inches maximum, unless otherwise noted.
a. For slabs the maximum slump shall be 3-1/2 inches.

- 3. Air Content: ASTM C 231 and ASTM C 138.
4. Compressive Test Specimens: ASTM C 31.
a. At least one set of six (6) standard 4-inch x 8-inch cylinders specimens from each composite sample.

- 5. Compressive Strength: ASTM C 39; test one set of three specimens at 28 days and one set of three specimens at 8 days.
a. The average compressive strength test shall be the average compressive strength from a set of two specimens obtained from the composite sample at age indicated.

- b. Specimens made to check the adequacy of the design for strength of concrete or as a basis for acceptance of concrete will be made and laboratory cured in accordance with ASTM C31.

- 6. Strength of each concrete mixture will be satisfactory if every average of any five consecutive compressive-strength tests equals or exceeds specified compressive strength and not more than one in ten shall have an average value less than 90% of the specified value.

- 7. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

- a. When the average of compressive tests for 5 consecutive cylinders falls below the specified strength, the design mix and water content shall be adjusted to produce the specified strength for concrete that is subsequently placed.

- b. The Engineer may order additional curing for that portion of the structure where the questionable concrete has been placed. In the event that such additional curing does not give the strength required as determined by load tests made in accordance with ACI 318 or cored cylinder tests, the Engineer may order

- defective parts removed and replaced, or reinforced, all at no additional expense to the Owner.
8. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION 03300

**NOT FOR
BIDDING
PURPOSES**

SECTION 313716.13 - RUBBLE-STONE RIPRAP

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Riprap placed loose.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Riprap
- 1. Basis of Measurement: Base square yard of riprap and bedding
- 2. Basis of Payment: Includes supply and placement of riprap

1.3 COORDINATION

- A. Coordinate Work of this Section with utilities Work.

1.4 PRELIMINARY MEETINGS NOT USED

1.5 MATERIALS

- A. Section 013300 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit manufacturer information regarding size distribution and types for rock for riprap.
- C. Samples:
 - 1. Submit (a minimum of 10 samples) of riprap materials to testing laboratory.
 - 2. Submit in airtight containers.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Qualifications Statement:
 - 1. Submit qualifications for manufacturer.

1.6 SUSTAINABLE DESIGN SUBMITTALS – NOT USED

1.7 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout Work of this Section.
- B. Perform Work according to AASHTO standards.

1.8 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.

PART 2 - PRODUCTS

2.1 SUSTAINABLE DESIGN CHARACTERISTICS – NOT USED

2.2 MATERIALS

- A. Riprap
 - 1. Description:
 - a. Irregular rock.
 - b. Solid and nonfriable.

2. Type: Granite.

3. Size:

a. Maximum: 4 inches

b. Minimum: 1.2 inches

- B. Provide materials according to AASHTO standards.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Place riprap where indicated on Drawings.
- B. Place riprap into position and remove foreign material from surfaces.
- C. Do not place riprap over frozen or spongy subgrade surfaces.
- D. Average Installed Thickness: As indicated **on** Drawings.

3.2 ATTACHMENTS – NOT USED

END OF SECTION 313716.13

**NOT FOR
BIDDING
PURPOSES**

SECTION 321713 - PARKING BUMPERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Precast concrete parking bumpers.
2. Plastic parking bumpers.
3. Parking bumper anchors.

1.2 QUANTITY AND PAYMENT PROCEDURES

A. Parking Bumpers:

1. Basis of Measurement: By each.
2. Basis of Payment: Includes installed bumper.

1.3 COORDINATION

- A. Coordinate Work with pavement placement and marking string.

1.4 SUBMITTALS

- A. Product Data: Unit configuration, dimensions.

B. Samples:

1. Two concrete bumpers, illustrating surface finish.
2. Two plastic bumpers, illustrating surface finish and color.

1.5 QUALITY ASSURANCE

- A. Perform Work according to State of Delaware Department of Transportation standards.

PART 2 - PRODUCTS

2.1 CONCRETE BUMPERS

A. Manufacturers:

1. Oldcastle Infrastructure Inc.; CRH Americas.

2. Substitutions: Permitted.
- B. Cement: ANSI/ASTM C150, portland Type I - Normal; white color.
- C. Concrete Materials: ASTM C33; water and sand.
- D. Reinforcing Steel: ASTM A615/A615M, 40 ksi yield grade, deformed billet bars, galvanized finish, strength and size commensurate with precast unit design.
- E. Air Entrainment Admixture: ANSI/ASTM C260.
- F. Use rigid molds, constructed to maintain precast units uniform in shape, size and finish. Maintain consistent quality during manufacture.
- G. Embed reinforcing steel, and provide for top reinforcement.
- H. Cure units to develop concrete quality, and to provide appearance bleed-free, non-staining, and surface cracking.
- I. Sand-blast exposed-to-view precast unit surfaces to light exposure.

2.2 CONFIGURATION

- A. Nominal Size: 12 inch high, 12 inch wide, 6 inch long.
- B. Promote manufacture standard.

2.3 ACCESSORIES

- A. Dowels: Steel, galvanized finish; 1/2 inch diameter, 6 inch long, pointed tip.

PART EXECUTION

3.1 INSTALLATION

- A. Install units without damage to shape or finish. Replace or repair damaged units.
- B. Install units in alignment with adjacent Work.
- C. Fasten units in place with two dowels for each bumper.

END OF SECTION 321713

SECTION 321723 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Traffic lines and markings.
2. Legends.
3. Paint.
4. Glass Beads.

1.2 MATERIALS

A. Traffic Lines and Markings:

1. Basis of Measurement: By linear feet.
2. Basis of Payment: Includes furnishing, installing, inspecting, and maintaining pavement markings for lines and legends, maintenance and protection of traffic.

1.3 REFERENCES STANDARDS

A. Manual on Uniform Traffic Control Devices, American Association of State Highway and Transportation Officials:

B. AASHTO M247 - Standard Specification for Glass Beads Used in Pavement Markings.

1.4 SUBMITTALS

A. Product Data: Formulation for each type of paint.

B. Manufacturer's Certificate: Products meet or exceed specified requirements.

C. Test and Evaluation Reports: Indicate source and acceptance test results according to AASHTO M247.

D. Manufacturer Instructions:

1. Application temperatures, eradication requirements, application rate, line thickness, type of glass beads, and bead embedment and application rate.
2. Installation requirements, including storage and handling procedures.

E. Source Quality-Control Submittals: Indicate results of shop tests and inspections.

F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

G. Qualifications Statements:

1. Submit qualifications for manufacturer and applicator.
2. Submit manufacturer's approval of applicator.

1.5 QUALITY ASSURANCE

- A. Perform Work according to Town of Georgetown standards.
- B. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.
- C. Applicator: Company specializing in performing Work of this Section with three years' experience and approved by manufacturer.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' experience.
- B. Applicator: Company specializing in performing Work of this Section with minimum three years' experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Storage:
 1. According to manufacturer instructions.
 2. Paint:
 - a. Insert containers several days prior to use. Paint has been stored more than 6 months.
 - b. Minimize exposure when transferring paint.
 - c. Seal drums and tanks when not in use.
- B. Protection:
 1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
 2. Provide additional protection according to manufacturer instructions.

1.8 AMBIENT CONDITIONS

- A. Do not apply materials if surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.

- B. Do not apply exterior coatings during rain or snow if relative humidity is outside range required by paint manufacturer, or if moisture content of surfaces exceeds that required by paint manufacturer.
- C. Minimum Conditions: Do not apply paint if temperatures are expected to fall below 50 degrees F within 24 hours after application.
- D. Thermoplastic Compound: Do not apply unless pavement surface temperature is minimum 40 degrees F and rising.
- E. Maximum VOCs: Do not exceed limit required by State or Environmental Protection Agency.

1.9 WARRANTY

- A. Furnish one year manufacturer's warranty for pavement markings.

PAVEMENT MARKINGS

2.1 PAINTED PAVEMENT MARKINGS

- A. Performance Requirements:
 - 1. Paint Adhesion: Adhere to road surface forming a continuous film one minute after application.
 - 2. Foot Drag: Kick freely to such as not to transfer or vehicle tires within two minutes after application.

B. Paint:

- 1. Description: White or yellow ready mixed pigmented binder emulsified in water capable of chipping separately applied reflective glass beads. Do not use paint containing any of the materials listed in Environmental Protection Agency CFR 40 Section 261.2 Table 1.

C. Roads:

- 1. Comply with AASHTO M247, Type 1.
- 2. Coating: Enhance embedment and adherence with paint.

D. Thermoplastic Compound:

- 1. Binder Component: Hydrocarbon resin, with pigment, beads, and filler uniformly dispersed.
- 2. Asphalt Concrete Primer:
 - a. Description: Thermosetting adhesive with a solids content of pigment reinforced synthetic rubber and synthetic plastic resin dissolved or dispersed in a volatile organic solvent.

- b. Solids Content: Not less than 10 percent by weight at 70 degrees F and 60 percent relative humidity.
 - c. Wet Film Thickness: 0.005 inch, plus or minus 0.03 inch.
3. Portland Cement Concrete Primer: Epoxy resin primer, as recommended by manufacturer of thermoplastic compound.

2.2 APPLICATION EQUIPMENT

A. Paint Gun:

- 1. Description: Simultaneously apply parallel lines of indicated width in solid or broken patterns or various combinations of those patterns.
- 2. Type: *[illegible]*.

B. *[illegible]*

- 1. Description: *[illegible]* dispense glass beads on paint surface at required application rate.
- 2. Type: Pressurized.

C. Measuring Device: Automatically and continuously measure to nearest foot length of each line

PART 1 EXECUTION

3.1 PREPARATION

A. Do not apply paint to concrete surfaces until concrete has cured for 28 days.

B. Agitate paint 1 to 1 1/2 minutes prior to application to ensure even distribution of pigment.

C. Maintenance and protection of

prevent interference with marking operations and protect traffic control markings before dry.

D. Surface Preparation.

- 1. Clean and dry paved surfaces prior to painting.
- 2. Blow or sweep surface free of dirt, debris, oil, grease, or gasoline.
- 3. Spot location of final pavement markings, as specified and as indicated on Drawings, by applying pavement spots 25 feet o.c.
- 4. Request inspection by Architect/Engineer after placing pavement spots and minimum three days prior to applying traffic lines.

3.2 DEMOLITION

- A. Remove existing markings in an acceptable manner, using methods that will cause least damage to pavement structure or surface.
- B. Do not remove existing pavement markings by painting over with blank paint.
- C. Repair pavement or surface damage caused by removal methods.
- D. Clean and repair existing reinstated lines and legends.

3.3 APPLICATION

A. Application Equipment:

Do not use an application speed for the machine greater than 10 miles per hour, unless approved by an engineer.

B. Painting:

1. Apply pavement markings in the direction of traffic. Do not apply pavement markings against the direction of traffic flow.
2. Protect pavement markings until tire crossing the marking do not leave tracks using methods approved by the engineer. Remove damaged markings produced from a vehicle crossing wet pavement markings by sandblasting, or other methods approved by the engineer. Replace the damaged markings.
3. Offset longitudinal lines at least 2 inches from the construction joints and 2 inches to the inside of shoulder breaks of pavement.
4. Manual letter numbers, letters, and symbols.
5. Prevent clattering and overspray when applying markings.
6. Paint Guns: Simultaneously apply paint under at the form specified rate.
7. Dispense pavement text.
8. Wet-Film Thickness:
 - a. 15 mils.
 - b. Edge Markings: 12 mils.

C. Reflective Media:

1. Immediately follow paint application.
2. Bead Guns:
 - a. Dispense glass beads simultaneously at specified rate.
 - b. Check guns by dispensing glass beads into gallon container for predetermined fixed period of time.
 - c. Verify weight of glass beads.

D. Thermoplastic Compound:

1. Place on dry pavement.
2. Apply centerline, skip line, edge line, and other longitudinal type markings with mobile applicator.
3. Place special markings, crosswalks, stop bars, legends, arrows, and similar patterns with portable applicator.

E. Raised Pavement Markers:

1. Align prefabricated markers and permanently fix in place by means of epoxy adhesives.
2. Prior to applying adhesive, thoroughly clean area by water blasting and by compressed air.

F. Dimensions and Locations: As indicated on Drawings.

G. Legends:

1. Use walk-behind strippers, and spray, or squeegee.
2. Do not use hand brushes or rollers.
3. Glass beads must be applied by hand.

H. Installation Standards: Install Work according to the Town of Georgetown and DelDOT standards.

3.4 FIELD QUALITY CONTROL

A. Inspect for incorrect location, insufficient thickness, edge width, coverage, retention, cured or discolored material, and insufficient bonding.

B. Acceptance:

1. Repair lines and markings which after application and curing do not meet following criteria:
 - a. Incorrect location
 - b. Insufficient thickness, width, coverage, or retention.
 - c. Uncured or discolored material.
 - d. Insufficient bonding.

3.5 CLEANING

A. Collect and legally dispose of residues from painting operations.

3.6 PROTECTION

A. Protect painted pavement markings from vehicular and pedestrian traffic until paint is dry and track free.

B. Unless material is track free at end of paint application convoy, use traffic cones to protect markings from traffic until track free.

- C. If vehicle crosses a marking and tracks it, or if splattering or overspray occurs, eradicate affected marking and resultant tracking and apply new markings.
- D. Follow manufacturer instructions or use minimum of 30 minutes of dry time.
- E. Barrier cones are satisfactory protection for materials being dried.

3.7 MAINTENANCE

- A. Provide service and maintenance of traffic paints for three years from date of Substantial Completion.

SECTION
**NOT FOR
BIDDING
PURPOSES**

SECTION 334200 - STORMWATER CONVEYANCE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Stormwater drainage piping.
2. Manholes.
3. Catch basins.
4. Cleanouts.
5. Pipe support systems.
6. Concrete encasement and saddles.
7. Bedding and compacted material.

1.2 DEFINITIONS – NOT USED

1.3 PRICE MEASUREMENT AND PAYMENT

A. Pipe and Fittings:

1. Basis of measurement: per linear foot.
2. Basis of payment includes excavating, bedding and fill, installation with accessories, geotextile fabric, pipe and fittings, and accessories.

B. Catch Basin and Cleanout:

1. Basis of measurement: per each unit for manhole, both of 1 foot.
2. Basis of payment includes excavating, bedding and fill, installation with accessories, and connection to sewer.

1.4 SUBMITTALS

- A. Product Data: Manufacturer information describing pipe, pipe accessories, and catch basins.
- B. Manufacturer's Certificate: Products meet or exceed specified requirements.
- C. Manufacturer Instructions: Special procedures required to install specified products.
- D. Qualifications Statement:
 1. Submit qualifications for manufacturer.

1.5 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record actual locations of pipe runs, connections, catch basins, and invert elevations.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.6 QUALITY ASSURANCE

- A. Perform Work according to Town of Georgetown standards.
- B. Contractor shall maintain at all times on site a set of official stamped approved project drawings for all disciplines (civil, architectural, mechanical, electrical, plumbing, etc.)

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' experience.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Section 06000 - Product Requirements: Record requirements for transporting, handling, storing, and displaying products.
- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Store material according to manufacturer instructions.
- D. Protection:
 - 1. Protect materials from moisture and damage during in-plant storage and from construction operations areas.
 - 2. Provide additional protection according to manufacturer instructions.

1.9 EXISTING CONDITIONS

- A. Field Measurements:
 - 1. Verify field measurements prior to fabrication.
 - 2. Indicate field measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 STORM DRAINAGE PIPING

A. Corrugated PE Piping:

1. Pipe:
 - a. Comply with AASHTO M252, Type S.
 - b. Type: Perforated.
 - c. Inside Nominal Diameter: 10 inches.

2. Fittings: PE.

3. Joints: Comply with AASHTO M252, Type S.

B. Smooth Interior PE Piping:

1. Pipe:
 - a. Comply with AASHTO M252, Type S.
 - b. Type: Smooth interior.
 - c. Inside Nominal Diameter: 10 inches.

2. Fittings: PE.

3. Joints: Comply with AASHTO M252, Type S.

2.2 BASES

A. As specified on Drawings

2.3 MATERIALS

A. Bedding and Cover

1. Bedding: Fill type, as specified on drawings.
2. Cover: Fill type, as specified on drawings.
3. Soil Backfill from above Pipe to Finish Grade: Soil type, as specified on drawings.
4. Subsoil: No rocks more than 6 inches in diameter, frozen earth, or foreign matter.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify that trench cut is ready to receive Work of this Section.

- C. Verify that excavations, dimensions, and elevations are as indicated.

3.2 PREPARATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation preparation.
- B. Correct over-excavation with coarse aggregate.
- C. Remove large stones and other hard matter that could damage piping or impede consistent backfilling or compaction.

3.3 INSTALLATION

A. Excavation and Bedding

1. Excavate trench to 4 inches below pipe invert.
2. Hand trim excavation for accurate placement of piping to indicated elevations.
3. Maintain optimum moisture content of bedding material to attain required compaction density.
4. Install pipe on compacted subgrade meeting bedding requirements, and cradle bottom 20 percent of pipe diameter.

B. Pipe

1. Pipes, Fittings, and Accessories: Comply with SH-90 M2.
2. Seal joints with approved sealant.
3. Place pipe on minimum 4 inch deep bed of Type 3 filter aggregate.
4. Cradle bottom 20 percent of pipe diameter to avoid point load.
5. Install aggregate at sides and over top of pipe.
6. Install aggregate to minimum compacted thickness of 12 inches, and compact to 95 percent maximum density.
7. Backfill and compaction: As specified in ASTM D2323, latest edition.

C. Catch Basins and Cleanouts:

1. Form bottom of excavation clean and smooth, and to indicated elevation.
2. Form and place cast-in-place concrete base pad, with provision for storm sewer pipe end sections.
3. Level top surface of base pad.
4. Sleeve concrete shaft sections to receive storm sewer pipe sections.
5. Establish elevations and pipe inverts for inlets and outlets as indicated on Drawings.
6. Mount lid and frame level in grout, secured to top section to indicated elevation.

3.4 TOLERANCES

- A. Maximum Variation from Indicated Pipe Slope: 1/8 inch in 10 feet.

3.5 FIELD QUALITY CONTROL

A. Inspection:

1. Request inspection by Engineer prior to and immediately after placing aggregate cover over pipe.

B. Testing:

1. Compaction Test:
 - a. Comply with AASHTO T 180.

2. If test results that do not meet specified requirements, remove and replace, and retest.

3.6 PROTECTION

A. Section 017000 - Execution and Closeout Requirements: Requirements for protecting finished Work.

B. Pipe and aggregate cover from or displaced until backfilling operation is in progress.

END OF SECTION 334200

**NOT FOR
BIDDING
PURPOSES**

SECTION 334236 - STORMWATER TRENCH DRAINS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Trench drains and accessories.

1.2 UNIT PRICES

- A. Trench Drain
 - 1. Basis of Measurement: By each.
 - 2. Basis of Payment: Includes excavation, bedding, channel drain, channel grate, specified accessories, installation, and backfilling.

1.3 SUBMITTALS

- A. Product Data: Manufacturer information for trench drain materials and components.
- B. Shop Drawings: Critical dimensions, installation and closing equipment, and other details.
- C. Manufacturer Certificate: Products meet or exceed specific requirements.
- D. Manufacturer Instructions: Installation requirements, including storage and handling procedures.

E. Qualifications Statement:

- 1. Submit qualifications for manufacturer.

1.4 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record actual locations of installed trench drains and accessories.

1.5 QUALITY ASSURANCE

- A. Perform Work according to Town of Georgetown standards.
- B. Manufacturer: Company specializing in manufacturing products specified in this Section with three years' experience.

- C. Contractor shall maintain at all times on site a set of official stamped approved project drawings for all disciplines (civil, architectural, mechanical/electrical, plumbing, etc.).

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- C. Store products according to manufacturer instructions.

D. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location and covering from construction operations as follows.

- 2. Provide additional protection according to manufacturer's instructions.

1.7 EXISTING CONDITIONS

A. Measurements

- 1. Verify field measurements prior to fabrication.
- 2. Indicate field measurements on Shop Drawings.

1.8 WARRANTY

- A. Furnish manufacturer's warranty for trench drains.

PART 2 PRODUCTS

2.1 TRENCH DRAINS

A. Manufacturers:

- 1. Advance Drainage Systems, Inc.
- 2. Crumpler Plastic Pipe, Inc.
- 3. JM Eagle; J-M Manufacturing Co., Inc.
- 4. Lane Enterprises Corporation.
- 5. Pacific Corrugated Pipe Company.

- B. Furnish materials according to the Town of Georgetown and Public Works standards.

C. Performance and Design Criteria:

1. Loading:
 - a. H-25, according to AASHTO HB-17.
 - b. Impact Allowance: Additional 5 percent.

D. Channel Drains:

1. Material: Tempered Commercial Aluminum.
2. Built-in Slope: As specified on Drawings.
3. Width: 5 inches.
4. ID: 10 inches.
5. Bottom Radius: 5 inches.
6. Channel Section Length: As specified on Drawings.
7. End Connections: Tongue and groove.
8. Bottom ... Molded.

E. Channel Covers:

1. Material: Ductile Iron.
2. Grate Openings: 0.5 in. by 1.72 in.
3. Open Surface Area: 22.82 sq. in./ft.
4. Color: Black.

F. ...ies:

1. ...rate l...
2. ...cap and s...ws.
3. ...ou...
4. Bottom outlet adapter.

2.2 MATERIALS

A. Bedding and Backfill:

1. Bedding ...ne, as specified on drawings.
2. Cover: compressive strength concrete, as specified on drawings.
3. Subsoil to rock more than 6 inches in ... frozen ... foreign

2.3 SOURCE QUALITY CONTROL

- A. Provide shop inspection and testing of completed assembly.
- B. Certificate of Compliance:
 1. If manufacturer is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at manufacturer's facility conforms to Contract Documents.
 2. Specified shop tests are not required for Work performed by approved manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify that excavation is ready to receive trench drains.

3.2 PREPARATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation preparation.

B. Do not install trench drains if site conditions include loads exceeding structural capacity of trench drains.

- C. Inspection:

- 1. Inspect trench drains immediately prior to placement in excavation to verify that trench drains are internally clean and free from damage.

Remove and replace damaged

3.3 INSTALLATION

- A. Installation:

- 1. As specified on plans.
- 2. Provide clearance around sidewalls of structure for construction operations.
- 3. If groundwater is encountered, prevent accumulation of water in excavation, place trench drains in trench.

- B. Place trench drain sections per manufacturer's level to elevations as indicated, and according to manufacturer's instructions.

- C. Backfilling and Compaction: As specified in ASTM D2321, latest edition.

- D. Cut and fit for pipe.

3.4 FIELD QUALITY CONTROL

- A. Inspection:

- 1. Verify alignment of gate and components.
- 2. Verify that gate operates smoothly and does not bind or scrape.

- B. Equipment Acceptance: Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.

3.5 DEMONSTRATION

- A. Demonstrate routine maintenance and emergency repair procedures to Owner's personnel.

END OF SECTION 334236

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