

DELAWARE STATE UNIVERSITY
CONTRACT # PC-24-013

SPECIFICATIONS
FOR

Hope House
Phase 1 Restoration

IN

Downtown Campus
34 N. State Street
Dover, Delaware 19901

PREPARED
BY

StudioJAED Architects & Engineers
2500 Wrangle Hill Road, Suite 110
Bear, DE 19701



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INVITATION TO BID

Sealed bids for Delaware State University Contract No. **PC-24-013 – Hope House Phase 1 Restoration** will be received by Delaware State University in the Office of Planning & Construction Room 105 in the Facilities Management Building, 1200 N. DuPont Highway, Dover, DE 19901-2277, by the date and time listed below, 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.

The bids can also be submitted electronically through email to contracts@desu.edu by the date and time listed below.

The email subject must have the project name and the contract number. The electronic response should have only one file in total. The filename must start with the vendor's name. The aggregate size of your response without compressing the file must not be more than 5 megabytes. Do not send any unnecessary messages to this email address. Otherwise, your emails will be marked as spam; thus, you will fully assume the risk/liability of the University's no response to your email messages. Bidder bears the risk of late delivery. Any bids received after the stated time will be automatically rejected.

Bidders bear the risk of incomplete response, late delivery, or delivery to the wrong email address of the University other than specified in this ITB. The bidder must make sure they receive a confirmation stating their bid has been received. The university is not responsible if the bids go into spam or are not delivered by the system whatsoever until the University confirms its receipt.

Only general contractors may submit bids for this project.

The project consists of selective exterior and interior restoration of the Hope House building. The extent of the scope of work is described in the bid documents.

A non-mandatory Pre-Bid Meeting will be held at the time and date listed below for the purpose of establishing the listing of subcontractors.

Sealed bids shall be addressed to the Delaware State University c/o the Office of Planning & Construction, Facilities Management Building, Room 105, Dover, DE 19901-2277, Attn: Khalid Zerrad. The outer envelope should clearly indicate: **"DSU CONTRACT NO. PC-24-013– Hope House Phase 1 Restoration - SEALED BID - DO NOT OPEN."**

Bidders may request an electronic copy of the bidding documents by submitting a written request to constructionbid@desu.edu.

Summary of Events and Dates:

11/2/2026	Non-Mandatory Pre-Bid Meeting will be held at the hope House at 10:00 a.m. Local Time. (34 North State Street Dover, DE 19901)
11/9/2026	Deadline for Questions (4:00 PM Local Time)
11/14/2026	Posting of Answers to Contractor Questions
11/19/2026	Proposals Due (3:00 PM Local Time)
1/4/2027	Anticipated Start of Construction Date (subject to change)

Note: All times listed above are the State of Delaware local time.

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

DRUG TESTING REQUIREMENTS FOR LARGE PUBLIC WORKS

Pursuant to 29 Del.C. §6908(a)(6), effective as of January 1, 2016, OMB has established regulations that require Contractors and Subcontractors to implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds. The regulations establish the mechanism, standards and requirements of a Mandatory Drug Testing Program that will be incorporated by reference into all Large Public Works Contracts awarded pursuant to 29 Del.C. §6962. Final publication of the identified regulations can be found at the following: [4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects](#)

END OF ADVERTISEMENT FOR BIDS

INSTRUCTIONS TO BIDDERS

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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 BOARD: The Delaware State University Board of Trustees

1.4 UNIVERSITY: The Delaware State University

1.5 AGENCY: The Delaware State University

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

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

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

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

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

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

1.12 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.

1.13 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.

1.14 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.

1.15 BID: A complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

- 1.16 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).
- 1.17 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.
- 1.18 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.
- 1.19 SURETY: The corporate body which is bound with and for the Contract, or which is liable, and which engages to be responsible for the Contractor's payments of all debts pertaining to and for his acceptable performance of the Work for which he has contracted.
- 1.20 BIDDER'S DEPOSIT: The security designated in the Bid to be furnished by the Bidder as a guaranty of good faith to enter into a contract with the Agency if the Work to be performed or the material or equipment to be furnished is awarded to him.
- 1.21 CONTRACT: The written agreement covering the furnishing and delivery of material or work to be performed.
- 1.22 CONTRACTOR: Any individual, firm or corporation with whom a contract is made by the Agency.
- 1.23 SUBCONTRACTOR: An individual, partnership or corporation which has a direct contract with a contractor to furnish labor and materials at the job site, or to perform construction labor and furnish material in connection with such labor at the job site.
- 1.24 CONTRACT BOND: The approved form of security furnished by the contractor and his surety as a guaranty of good faith on the part of the contractor to execute the work in accordance with the terms of the contract.
- 1.25 LIQUIDATED DAMAGES: An amount due and payable to the University by the Contractor for additional costs incurred by the University resulting from the Contractor's failure to complete within the Contract time.

ARTICLE 2: BIDDER'S REPRESENTATIONS

- 2.1 PRE-BID MEETING
- 2.1.1 A pre-bid meeting for this project will be held at the time and place designated. Attendance at this meeting is a pre-requisite for submitting a Bid, unless this requirement is specifically waived elsewhere in the Bid Documents.
- 2.2 By submitting a Bid, the Bidder represents that:
- 2.2.1 The Bidder has read and understands the Bidding Documents and that the Bid is made in accordance therewith.
- 2.2.2 The Bidder has visited the site, become familiar with existing conditions under which the Work is to be performed, and has correlated the Bidder's his personal observations with the requirements of the proposed Contract Documents.
- 2.2.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.
- 2.3 JOINT VENTURE REQUIREMENTS

- 2.3.1 For Public Works Contracts, each Joint Venturer shall be qualified and capable to complete the Work with their own forces.
- 2.3.2 Included with the Bid submission, and as a requirement to bid, a copy of the executed Joint Venture Agreement shall be submitted and signed by all Joint Venturers involved.
- 2.3.3 All required Bid Bonds, Performance Bonds, Material and Labor Payment Bonds must be executed by both Joint Venturers and be placed in both of their names.
- 2.3.4 All required insurance certificates shall name both Joint Venturers.
- 2.3.5 Both Joint Venturers shall sign the Bid Form and shall submit a copy of a valid Delaware Business License with their Bid.
- 2.3.6 Both Joint Venturers shall include their Federal E.I. Number with the Bid.
- 2.3.7 In the event of a mandatory Pre-bid Meeting, each Joint Venturer shall have a representative in attendance.
- 2.3.8 Due to exceptional circumstances and for good cause shown, one or more of these provisions may be waived at the discretion of the State.

2.4 ASSIGNMENT OF ANTITRUST CLAIMS

- 2.4.1 As consideration for the award and execution by the Owner of this contract, the Contractor hereby grants, conveys, sells, assigns and transfers to the State of Delaware all of its right, title and interests in and to all known or unknown causes of action it presently has or may now or hereafter acquire under the antitrust laws of the United States and the State of Delaware, relating to the particular goods or services purchased or acquired by the Owner pursuant to this contract.

ARTICLE 3: BIDDING DOCUMENTS

3.1 COPIES OF BID DOCUMENTS

- 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the Architectural/Engineering firm designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein.
- 3.1.2 Bidders shall use complete sets of Bidding Documents for preparation of Bids. The issuing Agency nor the Architect assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 3.1.3 Any errors, inconsistencies or omissions discovered shall be reported to the Architect immediately.
- 3.1.4 The Agency and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall report any errors, inconsistencies, or ambiguities discovered to the Architect.
- 3.2.2 Bidders or Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect at least seven days prior to the date for receipt of Bids. Interpretations,

corrections and changes to the Bidding Documents will be made by written Addendum. Interpretations, corrections, or changes to the Bidding Documents made in any other manner shall not be binding.

3.2.3 The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specification compliance will be the responsibility of the Bidder.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all permits, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

3.2.5 The Contractor will bear the costs for all impact and user fees associated with the project.

3.3 SUBSTITUTIONS

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

3.3.2 Requests for substitutions shall be made in writing to the Architect at least ten days prior to the date of the Bid Opening. Such requests shall include a complete description of the proposed substitution, drawings, performance and test data, explanation of required installation modifications due the substitution, and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval shall be final. The Architect is to notify Owner prior to any approvals.

3.3.3 If the Architect approves a substitution prior to the receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding.

3.3.4 The Architect shall have no obligation to consider any substitutions after the Contract award.

3.4 ADDENDA

3.4.1 Addenda will be mailed or delivered to all who are known by the Architect to have received a complete set of the Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 No Addenda will be issued later than 4 days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which extends the time or changes the location for the opening of bids.

3.4.4 Each bidder shall ascertain prior to submitting his Bid that they have received all Addenda issued, and shall acknowledge their receipt in their Bid in the appropriate space. Not acknowledging an issued Addenda could be grounds for determining a bid to be non-responsive.

ARTICLE 4: BIDDING PROCEDURES

4.1 PREPARATION OF BIDS

- 4.1.1 Submit the bids on the Bid Forms included with the Bidding Documents.
- 4.1.2 Submit the original Bid Form for each bid. Bid Forms may be removed from the project manual for this purpose.
- 4.1.3 Execute all blanks on the Bid Form in a non-erasable medium (typewriter or manually in ink).
- 4.1.4 Where so indicated by the makeup on the Bid Form, express sums in both words and figures, in case of discrepancy between the two, the written amount shall govern.
- 4.1.5 Interlineations, alterations or erasures must be initialed by the signer of the Bid.
- 4.1.6 BID ALL REQUESTED ALTERNATES AND UNIT PRICES, IF ANY. If there is no change in the Base Bid for an Alternate, enter "No Change". The Contractor is responsible for verifying that they have received all addenda issued during the bidding period. Work required by Addenda shall automatically become part of the Contract.
- 4.1.7 Make no additional stipulations on the Bid Form and do not qualify the Bid in any other manner.
- 4.1.8 Each copy of the Bid shall include the legal name of the Bidder and a statement whether the Bidder is a sole proprietor, a partnership, a corporation, or any legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current Power of Attorney attached, certifying agent's authority to bind the Bidder.
- 4.1.9 Bidder shall complete the Non-Collusion Statement form included with the Bid Forms and include it with their Bid.
- 4.1.10 In the construction of all Public Works projects for the State of Delaware or any agency thereof, preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State.
- 4.1.11 Each bidder shall include in their bid a copy of a valid Delaware Business License.'
- 4.1.12 Each bidder shall include signed Affidavit(s) for the Bidder and each listed Subcontractor certifying compliance with OMB Regulation 4104- "Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on "Large Public Works Projects." "Large Public Works" is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.
- 4.2 BID SECURITY
 - 4.2.1 All bids shall be accompanied by a deposit of either a good and sufficient bond to the agency for the benefit of the agency, with corporate surety authorized to do business in this State, the form of the bond and the surety to be approved by the agency, or a security of the bidder assigned to the agency, for a sum equal to at least 10% of the bid plus all add alternates, or in lieu of the bid bond a security deposit in the form of a certified check, bank treasurer's check, cashier's check, money order, or other prior approved secured deposit assigned to the State. The bid bond need not be for a specific sum, but may be stated to be for a sum equal to 10% of the bid plus all add alternates to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10% of the bid. The Bid Bond form used shall be the standard OMB form (attached).
 - 4.2.2 The Agency has the right to retain the bid security of Bidders to whom an award is being considered until either a formal contract has been executed and bonds have been furnished or the specified time has elapsed so the Bids may be withdrawn or all Bids have been rejected.

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

4.3 SUBCONTRACTOR LIST

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

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

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

4.4 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

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

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

4.5 PREVAILING WAGE REQUIREMENT

4.5.1 Wage Provisions: In accordance with Delaware Code, Title 29, Section 6960, renovation projects whose total cost shall exceed \$45,000, and \$500,000 for new construction, the minimum wage rates for various classes of laborers and mechanics shall be as determined by the Department of Labor, Division of Industrial Affairs of the State of Delaware.

4.5.2 The prevailing wage shall be the wage paid to a majority of employees performing similar work as reported in the Department's annual prevailing wage survey or in the absence of a majority, the average paid to all employees reported.

4.5.3 The employer shall pay all mechanics and labors employed directly upon the site of work, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics.

4.5.4 The scale of the wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work.

4.5.5 Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.

4.6 SUBMISSION OF BIDS

4.6.1 Enclose the Bid, the Bid Security, and any other documents required to be submitted with the Bid in a sealed opaque envelope. Address the envelope to the party receiving the Bids. Identify with the project name, project number, and the Bidder's name and address. If the Bid is sent by mail, enclose the sealed envelope in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof. The State is not responsible for the opening of bids prior to bid opening date and time that are not properly marked.

4.6.2 Deposit Bids at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bids. Bids received after the time and date for receipt of bids will be marked "LATE BID" and returned.

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

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

4.6.5 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids, provided that they are then fully in compliance with these Instructions to Bidders.

4.7 MODIFICATION OR WITHDRAW OF BIDS

4.7.1 Prior to the closing date for receipt of Bids, a Bidder may withdraw a Bid by personal request and by showing proper identification to the Architect. A request for withdraw by letter or fax, if the Architect is notified in writing prior to receipt of fax, is acceptable. A fax directing a modification in the bid price will render the Bid informal, causing it to be ineligible for consideration of award. Telephone directives for modification of the bid price shall not be permitted and will have no bearing on the submitted proposal in any manner.

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

ARTICLE 5: CONSIDERATION OF BIDS

5.1 OPENING/REJECTION OF BIDS

5.1.1 Unless otherwise stated, Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids will be made available to Bidders.

5.1.2 The Agency shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid Security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

5.1.3 If the Bids are rejected, it will be done within thirty (30) calendar day of the Bid opening.

5.2 COMPARISON OF BIDS

5.2.1 After the Bids have been opened and read, the bid prices will be compared and the result of such comparisons will be made available to the public. Comparisons of the Bids may be based on the Base Bid plus desired Alternates. The Agency shall have the right to accept Alternates in any order or combination.

- 5.2.2 The Agency reserves the right to waive technicalities, to reject any or all Bids, or any portion thereof, to advertise for new Bids, to proceed to do the Work otherwise, or to abandon the Work, if in the judgment of the Agency or its agent(s), it is in the best interest of the State.
- 5.2.3 An increase or decrease in the quantity for any item is not sufficient grounds for an increase or decrease in the Unit Price.
- 5.2.4 The prices quoted are to be those for which the material will be furnished F.O.B. Job Site and include all charges that may be imposed during the period of the Contract.
- 5.2.5 No qualifying letter or statements in or attached to the Bid, or separate discounts will be considered in determining the low Bid except as may be otherwise herein noted. Cash or separate discounts should be computed and incorporated into Unit Bid Price(s).

5.3 DISQUALIFICATION OF BIDDERS

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

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

ARTICLE 6: POST-BID INFORMATION

- 6.1 CONTRACTOR'S QUALIFICATION STATEMENT
- 6.1.1 Bidders to whom award of a Contract is under consideration shall, if requested by the Agency, submit a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a statement has been previously required and submitted.
- 6.2 BUSINESS DESIGNATION FORM

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

ARTICLE 7: PERFORMANCE BOND AND PAYMENT BOND

7.1 BOND REQUIREMENTS

- 7.1.1 The cost of furnishing the required Bonds, that are stipulated in the Bidding Documents, shall be included in the Bid.
- 7.1.2 If the Bidder is required by the Agency to secure a bond from other than the Bidder's usual sources, changes in cost will be adjusted as provide in the Contract Documents.
- 7.1.3 The Performance and Payment Bond forms used shall be the standard OMB forms (attached).

7.2 TIME OF DELIVERY AND FORM OF BONDS

- 7.2.1 The bonds shall be dated on or after the date of the Contract.
- 7.2.2 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix a certified and current copy of the power of attorney.

ARTICLE 8: FORM OF AGREEMENT BETWEEN AGENCY AND CONTRACTOR

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

ARTICLE 9: LIQUIDATED DAMAGES

- 9.1 Schedule of Liquidated Damages:

Schedule of Liquidated Damages		
Awarded Contract Value		Daily Charge
For Greater Than	Up to and Including	Calendar Day
\$0.00	\$25,000.00	\$290.00
\$25,000.00	\$50,000.00	\$300.00
\$50,000.00	\$100,000.00	\$400.00
\$100,000.00	\$500,000.00	\$630.00
\$500,000.00	\$1,000,000.00	\$820.00
\$1,000,000.00	\$2,000,000.00	\$1,000.00
\$2,000,000.00	\$5,000,000.00	\$1,060.00
\$5,000,000.00	\$10,000,000.00	\$1,180.00
\$10,000,000.00	\$15,000,000.00	\$1,870.00
\$15,000,000.00	\$20,000,000.00	\$3,130.00

\$20,000,000.00	Over	\$4,360.00
-----------------	------	------------

9.2

For each calendar day or work day that work remains uncompleted after the Contract time has expired or beyond the completion date established by the Contract, the sum specified in paragraph 9.1 of this document, will be deducted from any money due the Contractor. This sum shall not be considered and treated as a penalty but as liquidated damages due the University by reason of inconvenience to the public, added cost of engineering and supervision, and other extra expenditures of public funds due to the Contractor's failure to complete the work on time. Any adjustment of the Contract time for completion of the work granted by the University will be considered in the assessment of liquidated damages.

END OF SECTION 00 21 13



BID FORM

Project: PC-24-013 Hope House Phase 1 Restoration
Location: Delaware State University
Main Campus
1200 North DuPont Hwy
Dover, Delaware 19901

For Bids Due: November 19, 2026, 3:00 PM

To: Delaware State University
Facilities Building,
Office 105
1200 N. DuPont Highway
Dover, DE 19901-2277
Attn: Khalid Zerrad

Name of Bidder: _____

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

(Other License Nos.): _____

Phone No.: () _____ - _____ **Fax No.:** () _____ - _____

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

\$ _____ (Written Out).

(\$ _____) (Figures).

[This price includes all allowances as documented within the project manual.]

A. ALTERNATES (Note: *project is subject to prevailing wages*)

1. Alternates: Alternate prices conform to applicable project specification section. Refer to the drawing specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossing out the part that does not apply.

- a. **Alternate #1:** See drawing number AD-101 and A-101 Net - ADD / DEDUCT
 - _____ (Figures).
 - _____ (Written Out).

b. **Alternate #2:** See drawing number AD-101 and A-101 Net - ADD / DEDUCT

- _____ (Figures).
- _____ (Written Out).

c. **Alternate #3:** Net - ADD / DEDUCT

- _____ (Figures).
- _____ (Written Out).

B. UNIT PRICES

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

	<u>ADD</u>	<u>DEDUCT</u>
UNIT PRICE No. 1: _____ (BRIEF DESCRIPTION) \$ _____		\$ _____
UNIT PRICE No. 2: _____ (BRIEF DESCRIPTION) \$ _____		\$ _____
UNIT PRICE No. 3: _____ (BRIEF DESCRIPTION) \$ _____		\$ _____

C. WORK SCHEDULE

1. We understand that this contract is governed by liquidated damages and that submission of this bid is acceptance of the proposed contract completion date. Our proposed detailed project schedule shows more fully the sequence of activities necessary to meet the specified schedule. The project schedule is a required attachment of a complete bid and **failure to submit a viable schedule will be a justifiable reason to deem the bid as incomplete**. Bid schedule shall be submitted in Gantt Chart format (Microsoft Project preferred) to be deemed as an adequate project schedule.
- a. Schedule should be detailed by trade and show manpower, or provide narrative explaining planned crews.
 - b. Include milestones, phasing, critical path, etc.
 - c. Document any weather contingency built into schedule.

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

3. Alternative Work Hours

Work during "regular hours" at this site is being performed on a single shift, eight hours per day, 7:30 AM to 4:30 PM, and five days per week, Monday through Friday. To meet the schedule established on the basis of Item 1 above, our proposed work hours will be _____ hours per day, _____ AM to _____ PM, and _____ days per week, _____ through _____ the cost of which is reflected in our lump sum price. Our lump sum price also includes any mandatory off-hours work required per special conditions.

D. SITE SUPERINTENDANT

We propose to use _____ as our site superintendent. A resume of his/her qualifications is attached.

We understand that DSU reserves the right to interview him/her prior to contract award/prior to start of work and to reject him/her if not considered acceptable. If rejected, we will propose alternate personnel for the position who will be subject to the same review and acceptance procedure, at no increase in our lump sum proposal.

We also understand DSU reserves the right to reject our bid if we are unable to provide a site supervisor acceptable to DSU within thirty (30) calendar days after submission of this bid.

E. REMARKS

1. I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.
2. 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.
3. The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.
4. This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.
5. Our Bid Price(s) are firm based on contract award within thirty (30) calendar days of the date of submittal of this bid.
6. I/We understand that we will not be compensated at a later date for claimed additional costs based on any information received during the bid period, but which is not identified in our proposal and subsequently accepted in writing by DSU.

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

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

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

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

(State of Corporation)

Business Address: _____

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

(Title)

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Security
Construction Schedule
Resume of Site Superintendent
(Others as Required by Project Manuals)

END OF SECTION 00 41 13

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET

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 held and firmly unto the **State** in
the sum of _____ Dollars (\$_____),
or _____ percent not to exceed _____
_____ Dollars (\$_____) of amount of bid on Contract No. _____, to be
paid to the **State** for the use and benefit of _____ (*insert State agency
name*) for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors,
administrators, and successors, jointly and severally for and in the whole firmly by these presents.

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

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

SEALED, AND DELIVERED IN THE
Presence of

Corporate
Seal

By:

Name of Bidder (Organization)

Authorized Signature

Attest _____

Title

Name of Surety

Witness: _____

By:

Title

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, it is **required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

Subcontractor
Category

Subcontractor

Address (City & State)

Subcontractors tax payer ID #
or Delaware Business license #

Demolition
Masonry
Carpentry
Roofing
Painting

NON-COLLUSION STATEMENT

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

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

NAME OF BIDDER: _____

**AUTHORIZED REPRESENTATIVE
(TYPED):** _____

**AUTHORIZED REPRESENTATIVE
(SIGNATURE):** _____

TITLE: _____

ADDRESS OF BIDDER: _____

E-MAIL: _____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 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 jobsite, including subcontractors, that complies with this regulation:

Contractor/Subcontractor Name: _____

Contractor/Subcontractor Address: _____

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

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

My Commission expires _____ NOTARY PUBLIC _____

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

**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 is defined as “an apprenticeship program approved by and registered with any State apprenticeship agency or the United States Department of Labor.” 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://det.delawareworks.com/apprenticeship/>. Information pertaining to subcontractor craft training programs shall be provided by the contractor prior to contract execution. If you have questions regarding craft training programs, please submit them in writing to the Delaware Department of Labor at: apprenticeship@delaware.gov.

In accordance with Title 29, Chapter 69, Section 6962(d)(13) of the Delaware Code, contractors and subcontractors must provide craft training for journeyman and apprentice levels if **all** of the following apply:

- A. A project meets the prevailing wage requirement under Title 29, Chapter 69, Section 6960 of the Delaware Code.
- B. The 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(d)(13) of the Delaware Code.

Craft(s) _____

Contractor Name: _____

Contractor Address: _____

**Contractor/Subcontractor Program
Registration Number** _____

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

Authorized Representative (typed or printed): _____

Authorized Representative (signature): _____

Title: _____

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.

END OF SECTION

CONTRACTOR REGISTRATION ACT

On July 1, 2021, the Contractor Registration Act, as codified in 19 Del.C. §§ 3601 et seq, took effect. This law requires all contractors to register with the Delaware Department of Labor before performing construction services or maintenance. The Contractor Registration Act applies to all contractors that engage in construction and maintenance within the State of Delaware. Additionally, it requires contractors to have Delaware workers' compensation insurance where required, compliance with labor laws, and proof of a state business license. The Delaware Department of Labor's Office of Contractor Registration is responsible for enforcement of the requirements of the Contractor Registration Act. If you have any questions about the contractor registration process, please call 302-430-7739 or email Contract.Registry@delaware.gov. Registration at <https://onestop.delaware.gov/>.

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.

END OF SECTION 00 52 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.

ARTICLE 5: PAYMENTS

5.1 PROGRESS PAYMENTS

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

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

ARTICLE 8: MISCELLANEOUS PROVISIONS

8.2 Insert the following:

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

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

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

END OF SECTION 00 54 13

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET

PERFORMANCE BOND

Bond Number: _____

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

Sealed with our seals and dated this _____ day of _____, 20__.

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

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

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

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

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

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

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____ (SEAL)
Name:
Title:

SURETY

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____ (SEAL)
Name:
Title:

STATE OF DELAWARE
OFFICE OF MANAGEMENT AND BUDGET

PAYMENT BOND

Bond Number: _____

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

Sealed with our seals and dated this _____ day of _____, 20__.

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

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

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

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

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

PRINCIPAL

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____(SEAL)
Name:
Title:

SURETY

Name: _____

Witness or Attest: Address: _____

Name:

(Corporate Seal)

By: _____(SEAL)
Name:
Title:

APPLICATION AND CERTIFICATION FOR PAYMENT

AIA DOCUMENT G702

PAGE ONE OF

PAGES

TO OWNER:

Owner

0000 4th Street

Las Vegas, Nv. 00000

FROM CONTRACTOR:

XYZ ELECTRIC

000 Las Vegas BLVD.

Las Vegas, Nv. 00000

CONTRACT FOR: Elect. Systems VIA GENERAL CONTRACTOR: Burke And Associates

PROJECT: New Office & Warehouse

VIA ARCHITECT:

Arhitects

000 Tropicana Blvd.

Las Vegas, Nv. 00000

APPLICATION NO:

4

PERIOD TO:

12/31/99

PROJECT NOS:

NV000

CONTRACT DATE:

08/13/99

Distribution to:

☐

OWNER

☐

ARCHITECT

☐

CONTRACTOR

☐

GENERAL CONTRACTOR

☐

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.

Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM	\$	120,693.00
2. Net change by Change Orders	\$	832.16
3. CONTRACT SUM TO DATE (Line 1 ± 2)	\$	121,525.16
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703)	\$	53,064.30
5. RETAINAGE:		
a. % of Completed Work (Column D + E on G703)	\$	5,069.73
b. % of Stored Material (Column F on G703)	\$	236.70
Total Retainage (Lines 5a + 5b or Total in Column I of G703)	\$	5,306.43
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total)	\$	47,757.87
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)	\$	21,970.80
8. CURRENT PAYMENT DUE	\$	25,787.07
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6)	\$	73,767.29

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	
Total approved this Month	\$832.16	
TOTALS	\$832.16	\$0.00
NET CHANGES by Change Order	\$832.16	

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

CONTRACTOR:

XYZ ELECTRIC

By:

President

State of:

Subscribed and sworn to before me this

Notary Public:

My Commission expires:

Date:

12/31/99

County of:

day of

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, I, the undersigned Architect, certify that to the best of my knowledge and belief the Work covered by this Application for Payment has been completed 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. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

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.

CONTINUATION SHEET

ALA DOCUMENT G703

PAGE OF PAGES

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

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 4

APPLICATION DATE: 12/31/99

PERIOD TO: 12/31/99

ARCHITECT'S PROJECT NO:

[illegible]

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity

GENERAL CONDITIONS
TO THE
CONTRACT

The General Conditions of this Contract are as stated in the American Institute of Architects Document AIA A201 (2017 Edition) entitled General Conditions of the Contract for Construction and is part of this project manual as if herein written in full.

END OF SECTION 00 72 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.

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ARTICLE 1: GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

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

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

Add the following Paragraph:

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

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Paragraphs:

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

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

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

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

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

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

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

Delete Paragraph 1.5.2 in its entirety.

ARTICLE 2: OWNER

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

To Subparagraph 2.2.3 – Add the following sentence:

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

Delete Subparagraph 2.2.5 in its entirety and substitute the following:

2.2.5 The Contractor shall be furnished free of charge up to five (5) sets of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

ARTICLE 3: CONTRACTOR

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

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

Delete the third sentence in Paragraph 3.2.3.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Paragraphs:

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

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

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

3.4 LABOR AND MATERIALS

Add the Following Paragraphs:

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

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

3.5 WARRANTY

Add the following Paragraphs:

- 3.5.1 The Contractor will guarantee all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for two years after Acceptance by the Owner, and will maintain all items in perfect condition during the period of guarantee.
- 3.5.2 Defects appearing during the period of guarantee will be made good by the Contractor at his expense upon demand of the Owner, it being required that all work will be in perfect condition when the period of guarantee will have elapsed.
- 3.5.3 In addition to the General Guarantee there are other guarantees required for certain items for different periods of time than the two years as above, and are particularly so stated in that part of the specifications referring to same. The said guarantees will commence at the same time as the General Guarantee.
- 3.5.4 If the Contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the Owner will have the right to replace, repair, or otherwise remedy the failure, defect or damage at the Contractor's expense.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Paragraphs:

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

- 3.17 In the second sentence of the paragraph, insert "indemnify" between "shall" and "hold".

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.2 ADMINISTRATION OF THE CONTRACT

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

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

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

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

Add the following Paragraph:

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

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

ARTICLE 5: SUBCONTRACTORS

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

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

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

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

Delete Paragraph 6.1.4 in its entirety.

6.2 MUTUAL RESPONSIBILITY

6.2.3 In the second sentence, strike the word "shall" and insert the word "may".

ARTICLE 7: CHANGES IN THE WORK

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

ARTICLE 8: TIME

8.2 PROGRESS AND COMPLETION

Add the following Paragraphs:

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

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

8.3 DELAYS AND EXTENSION OF TIME

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

Add the following Paragraph:

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

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

- 8.3.3 Except in the case of a suspension of the Work directed by the Owner, an extension of time under the provisions of Paragraph 8.3.1 shall be the Contractor's sole remedy in the progress of the Work and there shall be no payment or compensation to the Contractor for any expense or damage resulting from the delay.

Add the following Paragraph:

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

ARTICLE 9: PAYMENTS AND COMPLETION

9.2 SCHEDULE OF VALUES

Add the following Paragraphs:

- 9.2.1 The Schedule of Values shall be submitted using AIA Document G702, Continuation Sheet to G703.
- 9.2.2 The Schedule of Values is to include a line item for Project Closeout Document Submittal. The value of this item is to be no less than 1% of the initial contract amount.

9.3 APPLICATIONS FOR PAYMENT

Add the following Paragraph:

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

Add the following Paragraphs:

- 9.3.4 Until Closeout Documents have been received and outstanding items completed the Owner will pay 95% (ninety-five percent) of the amount due the Contractor on account of progress payments.
- 9.3.5 The Contractor shall provide a current and updated Progress Schedule to the Architect with each Application for Payment. Failure to provide Schedule will be just cause for rejection of Application for Payment.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Add the following to 9.5.1:

- .8 failure to provide a current Progress Schedule;

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

9.6 PROGRESS PAYMENTS

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

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

9.7 FAILURE OF PAYMENT

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

9.8 SUBSTANTIAL COMPLETION

To Subparagraph 9.8.3 - Add the following sentence:

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

- 9.8.5 In the second sentence, strike "shall" and insert "may".

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

Add the following Paragraphs:

- 10.1.1.1.1 Each Contractor shall develop a safety program in accordance with the Occupational Safety and Health Act of 1970. A copy of said plan shall be furnished to the Owner and Architect prior to the commencement of that Contractor's Work.
- 10.1.2 Each Contractor shall appoint a Safety Representative. Safety Representatives shall be someone who is on site on a full time basis. If deemed necessary by the Owner or Architect, Contractor Safety meetings will be scheduled. The attendance of all Safety Representatives will be required. Minutes will be recorded of said meetings by the Contractor and will be distributed to all parties as well as posted in all job offices/trailers etc.

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Paragraph:

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

10.3 HAZARDOUS MATERIALS

Delete Paragraph 10.3.3 in its entirety.

Delete Paragraph 10.3.6 in its entirety.

ARTICLE 11: INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

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

11.2 OWNER'S LIABILITY INSURANCE

Delete Paragraph 11.2 in its entirety.

11.3 PROPERTY INSURANCE

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

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

11.4 PERFORMANCE BOND AND PAYMENT BOND

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

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.2.2 AFTER SUBSTANTIAL COMPLETION

Add the following Paragraph:

12.2.2.1 At any time during the progress of the Work, or in any case where the nature of the defects will be such that it is not expedient to have corrected, the Owner, at its option, will have the right to deduct such sum, or sums, of money from the amount of the Contract as it considers justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

12.2.2.1 Strike "one" and insert "two".

12.2.2.2 Strike "one" and insert "two".

12.2.2.3 Strike "one" and insert "two".

12.2.5 In second sentence, strike "one" and insert "two".

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

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

13.6 INTEREST

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

13.7 TIME LIMITS ON CLAIMS

Strike the last sentence.

Add the following Paragraph:

13.8 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS

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

Add the following Paragraph:

13.9 CLOUD-BASED PROJECT MANAGEMENT SYSTEM

13.9.1 The Contractor is responsible for communicating to the Owner and the Architect using the University's Cloud-Based Project Management System for the duration of the contract. The Owner will administer the site and shall provide login credentials to the Contractor following contract award.

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

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

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

ARTICLE 15: CLAIMS AND DISPUTES

15.1.2 Throughout the Paragraph strike "21" and insert "45".

15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

Delete Paragraph 15.1.6 in its entirety.

15.2 INITIAL DECISION

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

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

Delete Paragraph 15.2.6 and its subparagraphs in their entirety.

15.3 MEDIATION

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

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

15.4 ARBITRATION

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

END OF SECTION 00 73 13

00 72 14 INDEMNIFICATION

3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, the Owner's, Construction manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorney's 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) including loss or use resulting there from, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, their 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 which would otherwise exist as to a party or person described in this Paragraph 3.18.

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

3.18.3 The obligations of the Contractor under this Paragraph 3.18 shall not extend to the liability of the Construction Manager, Architect, their consultants, and agents and employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Construction Manager, Architect, their consultants, and agents and employees of any of them, provided such giving or failure to give is the primary cause of the injury or damage.

GENERAL REQUIREMENTS

TABLE OF ARTICLES

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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 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

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

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

ARTICLE 2: OWNER

(NO ADDITIONAL GENERAL REQUIREMENTS – SEE SUPPLEMENTARY GENERAL CONDITIONS)

ARTICLE 3: CONTRACTOR

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

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

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

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

ARTICLE 4: ADMINISTRATION OF THE CONTRACT

- 4.1 CONTRACT SURETY
- 4.1.1 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND
- 4.1.2 All bonds will be required as follows unless specifically waived elsewhere in the Bidding Documents.
- 4.1.3 Contents of Performance Bonds – The bond shall be in the form approved by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the

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

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

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

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

4.2 FAILURE TO COMPLY WITH CONTRACT

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

4.3 CONTRACT INSURANCE AND CONTRACT LIABILITY

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

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

4.4 RIGHT TO AUDIT RECORDS

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

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

ARTICLE 5: SUBCONTRACTORS

5.1 SUBCONTRACTING REQUIREMENTS

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

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

5.1.2 The decision of the awarding Agency as to whether a Bidder who list itself as the Subcontractor for a Subcontractor category shall be final and binding upon all Bidders, and no action of any nature shall lie against any awarding agency or its employees or officers because of its decision in this regard.

5.1.3 After such a Contract has been awarded, the successful Bidder shall not substitute another Subcontractor for any Subcontractor whose name was set forth in the statement which accompanied the Bid without the written consent of the awarding Agency.

5.1.4 No Agency shall consent to any substitution of Subcontractors unless the Agency is satisfied that the Subcontractor whose name is on the Bidders accompanying statement:

- A. Is unqualified to perform the work required;
- B. Has failed to execute a timely reasonable Subcontract;
- C. Has defaulted in the performance on the portion of the work covered by the Subcontract; or
- D. Is no longer engaged in such business.

5.1.5 Should a Bidder be awarded a contract, such successful Bidder shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of

the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.

5.2 PENALTY FOR SUBSTITUTION OF SUBCONTRACTORS

- 5.2.1 Should the Contractor fail to utilize any or all of the Subcontractors in the Contractor's Bid statement in the performance of the Work on the public bidding, the Contractor shall be penalized in the amount of (project specific amount*). The Agency may determine to deduct payments of the penalty from the Contractor or have the amount paid directly to the Agency. Any penalty amount assessed against the Contractor may be remitted or refunded, in whole or in part, by the Agency awarding the Contract, only if it is established to the satisfaction of the Agency that the Subcontractor in question has defaulted or is no longer engaged in such business. No claim for the remission or refund of any penalty shall be granted unless an application is filed within one year after the liability of the successful Bidder accrues. All penalty amounts assessed and not refunded or remitted to the contractor shall be reverted to the State.

*one (1) percent of contract amount not to exceed \$10,000

5.3 ASBESTOS ABATEMENT

- 5.3.1 The selection of any Contractor to perform asbestos abatement for State-funded projects shall be approved by the Office of Management and Budget, Division of Facilities Management pursuant to Chapter 78 of Title 16.

5.4 STANDARDS OF CONSTRUCTION FOR THE PROTECTION OF THE PHYSICALLY HANDICAPPED

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

5.5 CONTRACT PERFORMANCE

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

ARTICLE 6: CONSTRUCTION BY OWNER OR SEPARATE CONTRACTORS

- 6.1 The Owner reserves the right to simultaneously perform other construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other Projects at the same site.
- 6.2 The Contractor shall afford the Owner and other Contractors reasonable opportunity for access and storage of materials and equipment, and for the performance of their activities, and shall connect and coordinate their activities with other forces as required by the Contract Documents.

ARTICLE 7: CHANGES IN THE WORK

- 7.1 The Owner, without invalidating the Contract, may order changes in the Work consisting of Additions, Deletions, Modifications or Substitutions, with the Contract Sum and Contract completion date being

adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Professional, as the duly authorized agent, the Contractor and the Owner.

- 7.2 The Contract Sum and Contract Completion Date shall be adjusted only by a fully executed Change Order.
- 7.3 The additional cost, or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor and the Architect. In all cases, this cost or credit shall be based on the 'DPE' wages required and the "invoice price" of the materials/equipment needed.
 - 7.3.1 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes direct salary plus customary fringe benefits (prevailing wage rates) and documented statutory costs such as workman's compensation insurance, Social Security/Medicare, and unemployment insurance (a maximum multiplier of 1.35 times DPE).
 - 7.3.2 "Invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor, (or subcontractor), to a material distributor, direct factory vendor, store, material provider, or equipment leasing entity. Rates for equipment that is leased and/or owned by the Contractor or subcontractor(s) shall not exceed those listed in the latest version of the "Means Building Construction Cost Data" publication.
 - 7.3.3 In addition to the above, the General Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the General Contractor's own forces. For additional subcontractor work, the Subcontractor is allowed a fifteen (15) percent overhead and profit on change order work above and beyond the direct costs stated previously. To this amount, the General Contractor will be allowed a mark-up not exceeding seven and one half percent (7.5%) on the subcontractors work. These mark-ups shall include all costs including, but not limited to: overhead, profit, bonds, insurance, supervision, etc. No markup is permitted on the work of the subcontractors subcontractor. No additional costs shall be allowed for changes related to the Contractor's onsite superintendent/staff, or project manager, unless a change in the work changes the project duration and is identified by the CPM schedule. There will be no other costs associated with the change order.

ARTICLE 8: TIME

- 8.1 Time limits, if any, are as stated in the Project Manual. By executing the Agreement, the Contractor confirms that the stipulated limits are reasonable, and that the Work will be completed within the anticipated time frame.
- 8.2 If progress of the Work is delayed at any time by changes ordered by the Owner, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions, unavoidable casualties or other causes beyond the Contractor's control, the Contract Time shall be extended for such reasonable time as the Owner may determine.
- 8.3 Any extension of time beyond the date fixed for completion of the construction and acceptance of any part of the Work called for by the Contract, or the occupancy of the building by the Owner, in whole or in part, previous to the completion shall not be deemed a waiver by the Owner of his right to annul or terminate the Contract for abandonment or delay in the matter provided for, nor relieve the Contractor of full responsibility.
- 8.4 **SUSPENSION AND DEBARMENT**
 - 8.4.1 Per Section 6962(d)(14), Title 29, Delaware Code, "Any Contractor who fails to perform a public works contract or complete a public works project within the time schedule established by the Agency in the Invitation To Bid, may be subject to Suspension or Debarment for one or more of the following reasons:

a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the Project.”

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

8.5 RETAINAGE

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

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

ARTICLE 9: PAYMENTS AND COMPLETION

9.1 APPLICATION FOR PAYMENT

9.1.1 Applications for payment shall be made upon AIA Document G702. There will be a five percent (5%) retainage on all Contractor's monthly invoices until completion of the project. This retainage may become payable upon receipt of all required closeout documentation, provided all other requirements of the Contract Documents have been met.

9.1.2 A date will be fixed for the taking of the monthly account of work done. Upon receipt of Contractor's itemized application for payment, such application will be audited, modified, if found necessary, and approved for the amount. Statement shall be submitted to the Owner.

9.1.3 Section 6516, Title 29 of the Delaware Code annualized interest is not to exceed 12% per annum beginning thirty (30) days after the “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, receipted bills from all Contractors, Subcontractors, and material, men, etc., for the previous payment must accompany each application for payment. Following such a request, no payment will be made until these receipted bills have been received by the Owner.
- 9.3 SUBSTANTIAL COMPLETION
- 9.3.1 When the building has been made suitable for occupancy, but still requires small items of miscellaneous work, the Owner will determine the date when the project has been substantially completed.
- 9.3.2 If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and without terminating the Contract, the Owner may make payment of the balance due for the portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment that it shall not constitute a waiver of claims.
- 9.3.3 On projects where commissioning is included, the commissioning work as defined in the specifications must be complete prior to the issuance of substantial completion.
- 9.4 FINAL PAYMENT
- 9.4.1 Final payment, including the five percent (5%) retainage if determined appropriate, shall be made within thirty (30) days after the Work is fully completed and the Contract fully performed and provided that the Contractor has submitted the following closeout documentation (in addition to any other documentation required elsewhere in the Contract Documents):
 - 9.4.1.1 Evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid,
 - 9.4.1.2 An acceptable RELEASE OF LIENS,
 - 9.4.1.3 Copies of all applicable warranties,
 - 9.4.1.4 As-built drawings,
 - 9.4.1.5 Operations and Maintenance Manuals,
 - 9.4.1.6 Instruction Manuals,
 - 9.4.1.7 Consent of Surety to final payment.
 - 9.4.1.8 The Owner reserves the right to retain payments, or parts thereof, for its protection until the foregoing conditions have been complied with, defective work corrected and all unsatisfactory conditions remedied.

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

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

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

- 10.2 The Contractor shall notify the Owner in the event any existing hazardous material such as lead, PCBs, asbestos, etc. is encountered on the project. The Owner will arrange with a qualified specialist for the identification, testing, removal, handling and protection against exposure or environmental pollution, to comply with applicable regulation laws and ordinances. The Contractor and Architect will not be required to participate in or to perform this operation. Upon completion of this work, the Owner will notify the Contractor and Architect in writing the area has been cleared and approved by the authorities in order for the work to proceed. The Contractor shall attach documentation from the authorities of said approval.
- 10.3 As required in the Hazardous Chemical Information Act of June 1984, all vendors supplying any materials that may be defined as hazardous, must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a warning caution on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in any foreseeable emergency situation. Material Safety Data Sheets must be provided directly to the Owner along with the shipping slips that include those products.
- 10.4 The Contractor shall certify to the Owner that materials incorporated into the Work are free of all asbestos. This certification may be in the form of Material Safety Data Sheet (MSDS) provided by the product manufacturer for the materials used in construction, as specified or as provided by the Contractor.

ARTICLE 11: INSURANCE AND BONDS

- 11.1 The Contractor shall carry all insurance required by law, such as Unemployment Insurance, etc. The Contractor shall carry such insurance 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 collapse of or structural injury to any building or structure due to demolition work and evidence of these coverages shall be filed with and approved by the Owner.
- 11.4 The Contractor's Property Damage Liability Insurance shall, in addition to the coverage noted herein, include coverage on all real and personal property in their care, custody and control damaged in any way by the Contractor or their Subcontractors during the entire construction period on this project.
- 11.5 Builders Risk (including Standard Extended Coverage Insurance) on the existing building during the entire construction period, shall not be provided by the Contractor under this contract. The Owner shall insure the existing building and all of its contents and all this new alteration work under this contract during entire construction period for the full insurable value of the entire work at the site. Note, however, that the Contractor and their Subcontractors shall be responsible for insuring building materials (installed

and stored) and their tools and equipment whenever in use on the project, against fire damage, theft, vandalism, etc.

11.6 Certificates of the insurance company or companies stating the amount and type of coverage, terms of policies, etc., shall be furnished to the Owner, within 20 days of contract award.

11.7 The Contractor shall, at their own expense, (in addition to the above) carry the following forms of insurance:

11.7.1 Contractor's Contractual Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000	for each person
	\$1,000,000	for each occurrence
	\$2,000,000	aggregate
Property Damage	\$1,000,000	for each occurrence
	\$2,000,000	aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$500,000	for each person
	\$1,000,000	for each occurrence
	\$2,000,000	aggregate
Property Damage	\$500,000	for each occurrence
	\$500,000	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 Workmen's Compensation (including Employer's Liability):

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

11.7.5.2 Minimum Limit for all employees working at one site.

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

11.7.7 Social Security Liability

11.7.7.1 With respect to all persons at any time employed by or on the payroll of the Contractor or performing any work for or on their behalf, or in connection with or arising out of the Contractor's business, the

Contractor shall accept full and exclusive liability for the payment of any and all contributions or taxes or unemployment insurance, or old age retirement benefits, pensions or annuities now or hereafter imposed by the Government of the United States and the State or political subdivision thereof, whether the same be measured by wages, salaries or other remuneration paid to such persons or otherwise.

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

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

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK

12.1 The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any Work found to be not in accordance with the requirements of the Contract Documents within a period of two years from the date of Substantial Completion, or by terms of an applicable special warranty required by the Contract Documents. The provisions of this Article apply to work done by Subcontractors as well as to Work done by direct employees of the Contractor.

12.2 At any time during the progress of the work, or in any case where the nature of the defects shall be such that it is not expedient to have them corrected, the Owner, at their option, shall have the right to deduct such sum, or sums, of money from the amount of the contract as they consider justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

ARTICLE 13: MISCELLANEOUS PROVISIONS

13.1 CUTTING AND PATCHING

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

13.2 DIMENSIONS

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

13.3 LABORATORY TESTS

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

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

13.4 ARCHAEOLOGICAL EVIDENCE

13.4.1 Whenever, in the course of construction, any archaeological evidence is encountered on the surface or below the surface of the ground, the Contractor shall notify the authorities of the Delaware Archaeological Board and suspend work in the immediate area for a reasonable time to permit those authorities, or persons designated by them, to examine the area and ensure the proper removal of the archaeological evidence for suitable preservation in the State Museum.

13.5 GLASS REPLACEMENT AND CLEANING

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

13.6 WARRANTY

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

ARTICLE 14: TERMINATION OF CONTRACT

- 14.1 If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the costs of finishing the Work exceed any unpaid compensation due the Contractor, the Contractor shall pay the difference to the Owner.
- 14.2 "If the continuation of this Agreement is contingent upon the appropriation of adequate state, or federal funds, this Agreement may be terminated on the date beginning on the first fiscal year for which funds are not appropriated or at the exhaustion of the appropriation. The Owner may terminate this Agreement by providing written notice to the parties of such non-appropriation. All payment obligations of the Owner will cease upon the date of termination. Notwithstanding the foregoing, the Owner agrees that it will use its best efforts to obtain approval of necessary funds to continue the Agreement by taking appropriate action to request adequate funds to continue the Agreement."

END OF SECTION 00 81 13

**SECTION 011000
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Delaware State University Hope House Phase 1 Restoration
- B. Owner's Name: Delaware State University.
- C. Architect's Name: Studio JAED Architects & Engineers.
- D. The Project consists of the alteration of the building exterior for the purpose of preservation and operation of the existing historic building.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 005200 - Agreement Form.

1.03 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 024100.
- B. Scope of alterations work is indicated on drawings.

1.04 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.
- B. Owner intends to occupy a certain portion of the Project prior to the completion date for the conduct of normal operations.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

END OF SECTION

**SECTION 012000
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- E. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Execute certification by signature of authorized officer.
- E. Submit one electronic and three hard-copies of each Application for Payment.
- F. Include the following with the application:
 - 1. Transmittal letter as specified for submittals in Section 013000.
 - 2. Construction progress schedule, revised and current as specified in Section 013000.
 - 3. Current construction photographs specified in Section 013000.
 - 4. Partial release of liens from major subcontractors and vendors.

1.04 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.

- D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 016000.
- E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by Architect without a quotation from Contractor, the amount will be determined by Architect based on the Contractor's substantiation of costs as specified for Time and Material work.
- F. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- G. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- H. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- I. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- J. Promptly enter changes in Project Record Documents.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

END OF SECTION

**SECTION 012100
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Contingency allowance.
- B. Payment and modification procedures relating to allowances.

1.02 RELATED REQUIREMENTS

- A. Section 012000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 CONTINGENCY ALLOWANCE

- A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.
- B. Funds will be drawn from the Contingency Allowance only by Change Order.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.04 ALLOWANCES SCHEDULE

- A. Contingency Allowance: Include the stipulated sum/price of \$75,000.00 for use upon Owner's instructions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 012200
UNIT PRICES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. List of unit prices, for use in preparing Bids.
- B. Measurement and payment criteria applicable to Work performed under a unit price payment method.
- C. Defect assessment and non-payment for rejected work.

1.02 RELATED REQUIREMENTS

- A. Document 002113 - Instructions to Bidders: Instructions for preparation of pricing for Unit Prices.
- B. Document 004322 - Unit Prices Form: List of Unit Prices as supplement to Bid Form
- C. Section 012000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 COSTS INCLUDED

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.04 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

1.05 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by Architect.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.
- D. Measurement by Area: Measured by square dimension using mean length and width or radius.
- E. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- F. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.
- G. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify Architect prior to starting work.

1.06 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.

1.07 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Architect.
 - 2. The defective Work will be partially repaired to the instructions of the Architect, and the unit price will be adjusted to a new unit price at the discretion of Architect.
- C. If, in the opinion of Owner, it is not practical to remove and replace the Work, Owner will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Owner.
 - 2. The defective Work will be partially repaired to the instructions of the Owner, and the unit price will be adjusted to a new unit price at the discretion of Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 012300
ALTERNATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of Alternates.
- B. Procedures for pricing Alternates.
- C. Documentation of changes to Contract Price and Contract Time.

1.02 RELATED REQUIREMENTS

- A. Document 002113 - Instructions to Bidders: Instructions for preparation of pricing for Alternates.
- B. Document 004323 - Alternates Form: List of Alternates as supplement to Bid Form.

1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.04 SCHEDULE OF ALTERNATES

- A. Alternate No. 1 - _____:
 - 1. Base Bid Item: Section _____ and Drawing number AD101 and A-101 including _____.
- B. Alternate No. 2 - _____:
 - 1. Base Bid Item: Section _____ and Drawing number AD101 and A-101 including _____.
 - 2. Alternate Item: Section _____ and Drawing number AD101 and A-101 including _____.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 012500 SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 002113 - Instructions to Bidders: Restrictions on timing of substitution requests.
- B. Section 004325 - Substitution Request Form - During Procurement: Required form for substitution requests made prior to award of contract (During procurement).
- C. Section 006325 - Substitution Request Form - During Construction: Required form for substitution requests made after award of contract (During construction).

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - a. Unavailability.
 - b. Regulatory changes.
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
 - a. Substitution requests offering advantages solely to the Contractor will not be considered.

1.04 REFERENCE STANDARDS

- A. CSI/CSC Form 1.5C - Substitution Request (During the Bidding/Negotiating Stage); Current Edition.
- B. CSI/CSC Form 13.1A - Substitution Request (After the Bidding/Negotiating Phase); Current Edition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- B. A Substitution Request for specified installer constitutes a representation that the submitter:
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- D. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Forms indicated in the Project Manual are adequate for this purpose, and must be used.

- E. Limit each request to a single proposed substitution item.
 - 1. Submit an electronic document, combining the request form with supporting data into single document.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
 - 1. Instructions to Bidders specifies time restrictions and the documents required for submitting substitution requests during the bidding period.
- B. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing the form in Section 004325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):
 - 1. Submit substitution requests by completing the form in Section 006325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Architect will consider requests for substitutions only within 15 days after date of Agreement.
- C. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
- D. Submit request for Substitution for Convenience within 14 days of discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.
 - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
 - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
 - 3. Bear the costs engendered by proposed substitution of:
 - a. Owner's compensation to the Architect for any required redesign, time spent processing and evaluating the request.

3.04 RESOLUTION

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect will notify Contractor in writing of decision to accept or reject request.
 - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

3.05 ACCEPTANCE

3.06 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

END OF SECTION

**SECTION 013000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Electronic document submittal service.
- C. Preconstruction meeting.
- D. Site mobilization meeting.
- E. Progress meetings.
- F. Construction progress schedule.
- G. Contractor's daily reports.
- H. Progress photographs.
- I. Coordination drawings.
- J. Submittals for review, information, and project closeout.
- K. Number of copies of submittals.
- L. Requests for Interpretation (RFI) procedures.
- M. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions: Dates for applications for payment.
- B. Section 016000 - Product Requirements: General product requirements.

1.03 REFERENCE STANDARDS

- A. AIA G716 - Request for Information; 2004.
- B. AIA G810 - Transmittal Letter; 2001.

1.04 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 017000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Architect:
 - 1. Requests for Interpretation (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Test and inspection reports.
 - 5. Design data.
 - 6. Manufacturer's instructions and field reports.
 - 7. Applications for payment and change order requests.
 - 8. Progress schedules.
 - 9. Coordination drawings.
 - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an

Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.

1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Interpretation (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
 2. Contractor and Architect are required to use this service.
 3. It is Contractor's responsibility to submit documents in allowable format.
 4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
 5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
 7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- B. Cost: The cost of the service is to be paid by Contractor; include the cost of the service in the Contract Sum.
- C. Submittal Service: The selected service is:
1. Procore.
- D. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of Architect and Contractor participating; further training is the responsibility of the user of the service.
- E. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

3.02 PRECONSTRUCTION MEETING

- A. Owner will schedule a meeting after Notice of Award.
- B. Attendance Required:
1. Owner.
 2. Architect.
 3. Contractor.
- C. Agenda:
1. Execution of Owner-Contractor Agreement.
 2. Submission of executed bonds and insurance certificates.
 3. Distribution of Contract Documents.
 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 5. Submission of initial Submittal schedule.
 6. Designation of personnel representing the parties to Contract, _____ and Architect.
 7. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 8. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 SITE MOBILIZATION MEETING

- A. Owner will schedule meeting at the Project site prior to Contractor occupancy.

- B. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- C. Agenda:
 - 1. Use of premises by Owner and Contractor.
 - 2. Owner's requirements.
 - 3. Construction facilities and controls provided by Owner.
 - 4. Temporary utilities provided by Owner.
 - 5. Survey and building layout.
 - 6. Security and housekeeping procedures.
 - 7. Schedules.
 - 8. Application for payment procedures.
 - 9. Procedures for testing.
 - 10. Procedures for maintaining record documents.
 - 11. Requirements for start-up of equipment.
 - 12. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Architect will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Architect.
 - 4. Contractor's superintendent.
 - 5. Major subcontractors.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of RFIs log and status of responses.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Maintenance of quality and work standards.
 - 11. Effect of proposed changes on progress schedule and coordination.
 - 12. Other business relating to work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.05 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.

- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.06 DAILY CONSTRUCTION REPORTS

- A. Include only factual information. Do not include personal remarks or opinions regarding operations and/or personnel.
- B. In addition to transmitting electronically a copy to Owner and Architect, submit two printed copies at weekly intervals.
 - 1. Submit in format acceptable to Owner.
- C. Prepare a daily construction report recording the following information concerning events at Project site and project progress:
 - 1. Date.
 - 2. High and low temperatures, and general weather conditions.
 - 3. List of subcontractors at Project site.
 - 4. Approximate count of personnel at Project site.
 - 5. Major equipment at Project site.
 - 6. Material deliveries.
 - 7. Safety, environmental, or industrial relations incidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (submit a separate special report).
 - 10. Stoppages, delays, shortages, and losses. Include comparison between scheduled work activities (in Contractor's most recently updated and published schedule) and actual activities. Explain differences, if any. Note days or periods when no work was in progress and explain the reasons why.
 - 11. Testing and/or inspections performed.
 - 12. List of verbal instruction given by Owner and/or Architect.
 - 13. Signature of Contractor's authorized representative.

3.07 PROGRESS PHOTOGRAPHS

- A. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.
- B. Submit new photographs at least once a month, within 3 days after being taken.
- C. Photography Type: Digital; electronic files.
- D. Provide photographs of site and construction throughout progress of work produced by an experienced photographer, acceptable to Architect.
- E. In addition to periodic, recurring views, take photographs of each of the following events:
- F. Views:
 - 1. Provide non-aerial photographs from four cardinal views at each specified time, until date of Substantial Completion.
 - 2. Consult with Architect for instructions on views required.
 - 3. Provide factual presentation.
 - 4. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
- G. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
 - 1. Delivery Medium: Via email.

2. File Naming: Include project identification, date and time of view, and view identification.
3. PDF File: Assemble all photos into printable pages in PDF format, with 2 to 3 photos per page, each photo labeled with file name; one PDF file per submittal.
4. Hard Copy: Printed hardcopy (grayscale) of PDF file and point of view sketch.

3.08 COORDINATION DRAWINGS

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect.

3.09 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
 2. Prepare in a format and with content acceptable to Owner.
 3. Prepare using an electronic version of the form appended to this section.
 4. Prepare using software provided by the Electronic Document Submittal Service.
 5. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 016000 - Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
 4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
 - a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.

1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 2. Owner's, Architect's, and Contractor's names.
 3. Discrete and consecutive RFI number, and descriptive subject/title.
 4. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 5. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 6. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
 2. Note dates of when each request is made, and when a response is received.
 3. Highlight items requiring priority or expedited response.
 4. Highlight items for which a timely response has not been received to date.
 5. Identify and include improper or frivolous RFIs.
- H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
 4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.10 SUBMITTAL SCHEDULE

- A. Submit to Architect for review a schedule for submittals in tabular format.
1. Submit at the same time as the preliminary schedule specified in Section - 013216 - Construction Progress Schedule.
 2. Coordinate with Contractor's construction schedule and schedule of values.
 3. Format schedule to allow tracking of status of submittals throughout duration of construction.
 4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.

5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
 - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

3.11 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 1. Product data.
 2. Design data.
 3. Shop drawings.
 4. Samples for selection.
 5. Samples for verification.
 6. _____.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 017800 - Closeout Submittals.

3.12 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 1. Design data.
 2. Certificates.
 3. Test reports.
 4. Inspection reports.
 5. Manufacturer's instructions.
 6. Manufacturer's field reports.
 7. Field engineering daily reports.
 8. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

3.13 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 017800 - Closeout Submittals:
 1. Project record documents.
 2. Operation and maintenance data.
 3. Warranties.
 4. Bonds.
 5. Project Closeout List will be provided by Owner..
 6. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.14 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
 1. After review, produce duplicates.

2. Retained samples will not be returned to Contractor unless specifically so stated.

3.15 SUBMITTAL PROCEDURES

A. General Requirements:

1. Use a separate transmittal for each item.
2. Use a single transmittal for related items.
3. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
4. Transmit using approved form.
5. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
6. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
7. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
8. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Deliver submittals to Architect at business address.
9. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
 - c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days.
10. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
11. Provide space for Contractor and Architect review stamps.
12. When revised for resubmission, identify all changes made since previous submission.
13. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
14. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
15. Submittals not requested will not be recognized or processed.
16. Submittals not requested will be recognized, and will be returned "Not Reviewed",

B. Product Data Procedures:

1. Submit only information required by individual specification sections.
2. Collect required information into a single submittal.
3. Submit concurrently with related shop drawing submittal.
4. Do not submit (Material) Safety Data Sheets for materials or products.
5. Submit sustainable design reporting submittals under separate cover.

C. Shop Drawing Procedures:

1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
2. Do not reproduce Contract Documents to create shop drawings.
3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

D. Samples Procedures:

1. Transmit related items together as single package.

2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.

3.16 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. Architect's and consultants' actions on items submitted for review:
 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Approved", or language with same legal meaning.
 - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
 - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
 - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
 - 2) Non-responsive resubmittals may be rejected.
 2. Not Authorizing fabrication, delivery, and installation:
 - a. "Revise and Resubmit".
 - 1) Resubmit revised item, with review notations acknowledged and incorporated.
 - 2) Non-responsive resubmittals may be rejected.
 - b. "Rejected".
 - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
 1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION

**SECTION 013216
CONSTRUCTION PROGRESS SCHEDULE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 REFERENCE STANDARDS

- A. AGC (CPSM) - Construction Planning and Scheduling Manual; 2004.
- B. M-H (CPM) - CPM in Construction Management - Project Management with CPM; 2016, with Addendum (2021).

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit in PDF format.
- G. Submit under transmittal letter form specified in Section 013000 - Administrative Requirements.

1.04 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches (560 x 432 mm).
- C. Sheet Size: Multiples of 8-1/2 x 11 inches (216 x 280 mm).
- D. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- D. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.
- G. Provide narrative report to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect.

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION

**SECTION 013553
SECURITY PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Security measures including formal security program, entry control, personnel identification, and miscellaneous restrictions.

1.02 SECURITY PROGRAM

- A. Protect Work , existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
- B. Initiate program at project mobilization.
- C. Initiate program in coordination with Owner's existing security system at project mobilization.
- D. Maintain program throughout construction period until Owner acceptance precludes the need for Contractor security.

1.03 ENTRY CONTROL

- A. Restrict entrance of persons and vehicles into Project site and existing facilities.
- B. Allow entrance only to authorized persons with proper identification.

1.04 PERSONNEL IDENTIFICATION

- A. Provide identification badge to each person authorized to enter premises.
- B. Badge To Include: Personal photograph, name, assigned number , expiration date and employer.
- C. Require return of badges at expiration of their employment on the Work.

1.05 RESTRICTIONS

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 013591
PERIOD TREATMENT PROCEDURES**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Construction procedures appropriate for working with historic sites and structures.
- B. Special procedures required for items and features of historical significance and value requiring special treatment.

1.02 RELATED REQUIREMENTS

- A. Section 020342 - Removal and Salvage of Period Construction Materials.

1.03 DEFINITIONS

- A. Consolidate: Strengthen loose or deteriorated materials in situ.
- B. Dismantle: Disassemble and detach items by hand from existing construction to the limits indicated, using small hand tools and small one-hand power tools, to protect nearby historic surfaces, and legally dispose of dismantled items off-site, unless indicated to be salvaged or reinstalled.
- C. Existing to Remain: Existing items that are not to be removed or dismantled. Protect materials as indicated.
- D. Historic: Spaces, areas, rooms, surfaces, materials, finishes, and overall appearance subject to preservation, rehabilitation, restoration, and reconstruction procedures defined in NPS (THP). Designation "HF" and words such as "historic," "historic fabric," "historic materials," "historic building materials," 'historic character,' or words of similar meaning indicate that the material or feature is considered to have aspects that require period treatment procedures.
- E. Historic Preservation Conservator: Person or firm retained by Owner to provide guidance on compliance with NPS (THP) requirements.
- F. In-Kind: Matching existing in physical and visual aspects including, but not limited to, material, form, color, texture, and workmanship.
- G. Matching: Blending with adjacent construction and showing no apparent difference in material type, form, detail, color, texture, finish, or other visible and readily discernible characteristics, as determined and approved by Architect.
- H. Preserve: Apply measures to sustain existing form, integrity, and materials of a historic property; may include preliminary measures to protect and stabilize the property.
- I. Protect: Take precautions to keep historic materials of the building from damage or injury.
- J. Reconstruct: Remove existing item, refurbish existing or replicate damaged or missing components as indicated or directed, and reinstall in original position.
- K. Refinish: Remove existing finishes from base material and apply new finish to match original or as otherwise indicated.
- L. Remove: Detach or dismantle items from existing construction and dispose of them off-site, unless items are indicated to be salvaged or reinstalled.
- M. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall in original location or in other location where indicated.
- N. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label, and deliver salvaged items to Owner in ready-for-reuse condition.
- O. Repair: Correct damage and defects, retaining existing materials, features, and finishes and employing as few new materials as possible. Includes patching, piecing-in, splicing,

consolidating, or reinforcing or upgrading materials with appropriate and approved materials and methods.

- P. Replace: Remove, duplicate, and reinstall entire item with new material. Use original item as the pattern unless noted otherwise.
- Q. Replicate or Reproduce: Fabricate a new item in exact detail, materials, and finish as the original, unless otherwise indicated; referred to as replicas or reproductions.
- R. Restore: Return to original condition; return to the condition extant during the period of interpretation.
- S. Retain: Existing to remain; keep existing items that are not to be removed or dismantled.
- T. Reversible: New construction work, treatment, or processes that can be removed or undone in the future without damaging historic materials.
- U. Stabilize: Provide reinforcement of unsafe or deteriorated items and maintain the present, essential form; reestablish weather-resistant enclosure.
- V. Strip: Remove existing finish down to base material, unless otherwise indicated.

1.04 REFERENCE STANDARDS

- A. ASTM C734 - Standard Test Method for Low-Temperature Flexibility of Latex Sealants After Artificial Weathering; 2015 (Reapproved 2024).
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2027.
- C. NPS (THP) - The Secretary of The Interior's Standards For the Treatment of Historic Properties with Guidelines For Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings; 2017.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Quality Control Submittals:
 - 1. Practices and Treatments: Use NPS (THP) recommendations as a general guide for proposed practices and treatments, modified as necessary to suit project requirements and conditions.
 - 2. Phase Programs: Submit program, in writing, for each phase of period treatment procedures, indicating:
- C. Restoration specialist's qualification statement.
- D. Project supervisor's qualification statement.
- E. Existing Conditions Documentation: Prior to commencement of period treatment activities, document with digital photography, digital videography, digital photogrammetry, or similar means the existing exterior walls, windows, doors, roofs and roofing, trim, decorative elements, and building services equipment and distribution systems indicated as subject to period treatment.
- F. Project Record Documents:
 - 1. Record of conditions encountered before, during, and after completion of work.

1.06 QUALITY ASSURANCE

- A. Restoration Specialist Qualifications: Company specializing in restoration work, with at least three years of documented experience in comparable projects, and employing personnel skilled in the procedures and operations required by project scope of work.
- B. Project Supervisor: Master craftsman with at least three years of documented experience in leading work similar in size and scope to this project.
 - 1. Be present when a craftsman begins to perform the work; explain the intended procedures.

2. Supervise and actively participate in specific procedures.
- C. Craftspersons: Perform specific cleaning, repairing, and refinishing tasks; have demonstrated applicable successful experience in past historical preservation and restoration projects.

1.07 MOCK-UPS

- A. Arrange for one or more demonstration mock-ups, ____ feet (____ m) long by ____ feet (____ m) wide, using each type of proposed cleaning, repairing, and refinishing materials and methods.
 1. Proceed with mock-up work only after initial approval of proposed materials and methods by Architect.
 - a. Maintain the mock-up in its approved condition until final acceptance of the completed work.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Protection:
 1. Use and reuse materials original to the existing structure wherever practical. Store removed materials under cover, inside, and protect from damage.
 2. Label specific pieces or items to be removed. Label consistently and inconspicuously indicating original location, and document original position.
 3. Protect materials during storage and construction from rain, snow, or groundwater and from soiling with earth or other materials.
 - a. Store cementitious materials off ground, under cover, and in a dry location. Protect liquid components from freezing.
 - b. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.
 4. Store restoration and cleaning chemicals off-site or in metal cabinets on-site. Do not leave cans open or out of the cabinet overnight. Do not store in unlabeled containers.

1.09 FIELD CONDITIONS

- A. Smoking and use of tobacco products by personnel performing work on or about designated period treatment areas is not allowed.
- B. Environmental Requirements:
 1. Wet or Humid Weather:
 - a. Do not remove exterior elements of structures when raining or rain is forecasted.
 - b. Do not apply primer, paint, putty, or epoxy when the relative humidity is above 80 percent and in accordance with manufacturer's recommendations.
 - c. Do not repair exterior features in rain or fog.
 2. Hot Weather: Work in the shade when the temperature is above 75 degrees F (23.9 degrees C). Shield features or areas from excessive heat with protective netting or tarpaulins.
 - a. Hot Weather Maximum Application Ambient Temperatures:
 - 1) Paint: 85 degrees F (29.44 degrees C).
 - 2) Epoxy: 80 degrees F (26.67 degrees C).
 3. Cold Weather: Do not perform exterior wet work when the air temperature is below 40 degrees F (4.4 degrees C).
 - a. Cold Weather Minimum Application Ambient Temperatures:
 - 1) Paint: 50 degrees F (10 degrees C).
 - 2) Putty: 50 degrees F (10 degrees C).
 - 3) Epoxy: 55 degrees F (12.78 degrees C).
- C. Exterior Cleaning Procedures: Perform cleaning and rinsing of the exterior elements only during daylight hours.

- D. Protection of Existing Elements: In accordance with manufacturer's recommendations for use of proposed products and procedures and compatibility with adjacent historic building materials, components, and vegetation.

PART 2 - PRODUCTS

2.01 PROTECTION PRODUCTS

- A. Adhesive Walk-Off, Tacky Mats: Mats with multiple layers of disposable, adhesive-coated sheets.
 - 1. Sheet Material: Polyethylene film.
 - 2. Adhesive: Acrylic.
 - 3. Applications: Indoor/Outdoor.
 - 4. Nominal Mat Size: Contractor's option, to provide adequate dirt trapping.
- B. Low-Tack Sealant: Temporary, flexible, watertight and weather-resistant seal, and removable without marring substrates for a period of up to 6 months.
 - 1. Low Temperature Flexibility: Pass at 32 degrees F (0 degrees C), tested in accordance with ASTM C734.

2.02 CLEANING MATERIALS

- A. General: Do not use incompatible materials that may contribute to damage of the element being cleaned.
- B. Use products specifically intended by the manufacturer for cleaning historic materials or elements.

2.03 REPAIR MATERIALS

- A. General: Do not use incompatible materials contributing to damage of repaired elements.
- B. Matching: Unless otherwise required, use new materials that match historic materials in type, design, dimension, texture, detailing, and external appearance.

2.04 REFINISHING MATERIALS

- A. General: Do not use incompatible materials that may contribute to damage of the element being refinished.
- B. Matching: Unless otherwise required, use new materials that match historic materials in type, design, texture, detailing, and external appearance.

PART 3 - EXECUTION

3.01 PERIOD TREATMENT SPECIAL PROCEDURES

- A. Comply with NFPA 241 including, but not limited to, applicable recommendations in Annex A.
- B. Period Treatment Work: Intended to halt deterioration and stabilize the condition of building elements. Repair is necessary where preservation is not sufficient to ensure mid- to long-term survival. Select repair means and methods based on minimal disturbance of existing materials, systems, and assemblies.
- C. Selective removal and salvage of identified historic items and materials and removal of rubbish and debris.
- D. Review proposed procedures for each type of element with Architect. Obtain approval from Architect before commencing work.
- E. Salvage as much existing material of each element as practicable; repair, consolidate, and restore rather than renew.
- F. Repair rather than replace architectural features wherever possible. Repair or replace missing features with accurate duplications.
- G. Use reversible processes wherever possible.
- H. Use methods that do not significantly change the aesthetic effect of existing elements.

- I. Document condition of items being worked on before, during, and after work is completed.
- J. Provide Owner's written approval of changes, additions, or removal of historic structural fabric or historic property.
- K. Notify Owner of visible changes in the integrity of material or components, e.g., environmental, such as biological attack, ultraviolet degradation, freeze-thaw, or structural defects such as cracks, movement, or distortion.
- L. Protect existing materials and substrates from damage.
- M. Protect existing elements and features removed, cleaned, and reused from material damage.
 - 1. Label salvaged items and features and store at project site, in designated location; protect from damage.
 - 2. Permanently label new or replacement materials and features in an unobtrusive manner. Record type of identification and location of labels.
- N. Exterior Work Procedures: Protect parts of the facility not included in this work from damage.
 - 1. Protect adjacent property from damage from this work.
 - 2. Do not attach scaffolding, ladders, and working platforms to building unless approved in writing by the Architect.
 - 3. Test drain systems to assure proper functioning before performing cleaning operations. Notify Owner if stopped or blocked.
 - a. Clean drains and drain lines blocked or filled with sand or solids.
 - 4. Seal exterior openings to prevent entry of dust, debris, and water into the building.
 - 5. Protect landscape work adjacent to or within period treatment work areas:
 - a. Set scaffolding and ladder legs away from plants. Submit pruning requests to Architect.
 - b. Use covering methods and materials that allow plants to breathe. Remove covering at the end of each workday. Do not cover plant material with a waterproof membrane for more than 8 hours at one time.

END OF SECTION

**SECTION 014000
QUALITY REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Contractor's construction-related professional design services.
- F. Control of installation.
- G. Mock-ups.
- H. Tolerances.
- I. Manufacturers' field services.
- J. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Section 014216 - Definitions.

1.03 REFERENCE STANDARDS

- A. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2026.
- B. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2026.
- C. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2025.

1.04 DEFINITIONS

- A. Contractor's Quality Control Plan: Contractor's management plan for executing the Contract for Construction.
- B. Design Data: Design-related, signed and sealed drawings, calculations, specifications, certifications, shop drawings and other submittals provided by Contractor, and prepared directly by, or under direct supervision of, appropriately licensed design professional.

1.05 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
 - 1. Temporary sheeting, shoring, or supports.
 - 2. Temporary scaffolding.
 - 3. Temporary bracing.
 - 4. Investigation of soil conditions to support construction equipment.

1.06 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Designer's Qualification Statement: Submit for Architect's knowledge as contract administrator, or for Owner's information.
 - 1. Include information for each individual professional responsible for producing, or supervising production of, design-related professional services provided by Contractor.
 - a. Full name.
 - b. Professional licensure information.

- c. Statement addressing extent and depth of experience specifically relevant to design of items assigned to Contractor.
- C. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
 - 1. Include calculations that have been used to demonstrate compliance to performance and regulatory criteria provided, and to determine design solutions.
 - 2. Include required product data and shop drawings.
 - 3. Include a statement or certification attesting that design data complies with criteria indicated, such as building codes, loads, functional, and similar engineering requirements.
 - 4. Include signature and seal of design professional responsible for allocated design services on calculations and drawings.
- D. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Compliance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
- E. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- F. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- G. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit report in duplicate within 30 days of observation to Architect for information.
 - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

1.07 QUALITY ASSURANCE

- A. Testing Agency Qualifications:
 - 1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
 - 3. Qualification Statement: Provide documentation showing testing laboratory is accredited under IAS AC89.

1.08 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.09 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. As indicated in individual specification sections, Owner or Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Contractor Employed Agency:

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Architect will use to judge the Work.
- C. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.

- D. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- E. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
 - 1. Architect will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
 - 2. Make corrections as necessary until Architect's approval is issued.
- F. Architect will use accepted mock-ups as a comparison standard for the remaining Work.
- G. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

3.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

- A. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Architect.
 - 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
 - 3. Agency may not assume any duties of Contractor.
 - 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
 - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 - 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 - 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

- D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.
- E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.05 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment, and _____ as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.

END OF SECTION

**SECTION 014216
DEFINITIONS**

PART 1 GENERAL

1.01 SUMMARY

- A. Other definitions are included in individual specification sections.

1.02 DEFINITIONS

- A. Furnish: To supply, deliver, unload, and inspect for damage.
- B. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.
- C. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.
- D. Project Manual: The book-sized volume that includes the procurement requirements (if any), the contracting requirements, and the specifications.
- E. Provide: To furnish and install.
- F. Supply: Same as Furnish.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 015000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers, enclosures, and fencing.
- E. Security requirements.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Project identification sign.
- I. Field offices.

1.02 RELATED REQUIREMENTS

- A. Section 015100 - Temporary Utilities.
- B. Section 015213 - Field Offices and Sheds.
- C. Section 015500 - Vehicular Access and Parking.

1.03 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- B. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.

1.04 TEMPORARY UTILITIES - SEE SECTION 015100

- A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.

1.05 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
- B. Telecommunications services shall include:

1.06 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.07 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.08 FENCING

- A. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.09 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1.10 SECURITY - SEE SECTION 013553

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.11 VEHICULAR ACCESS AND PARKING - SEE SECTION 015500

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.12 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.13 PROJECT IDENTIFICATION

- A. Provide project identification sign of design and construction indicated on drawings.
- B. Erect on site at location indicated.
- C. No other signs are allowed without Owner permission except those required by law.

1.14 FIELD OFFICES - SEE SECTION 015213

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack, and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.
- C. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 016000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Substitution limitations.

1.02 RELATED REQUIREMENTS

- A. Section 012500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 014000 - Quality Requirements: Product quality monitoring.
- C. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- D. Section 017419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. See Section 014000 - Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
 - 1. Made using or containing CFC's or HCFC's.
 - 2. Made of wood from newly cut old growth timber.
 - 3. Containing lead, cadmium, or asbestos.
- D. Where other criteria are met, Contractor shall give preference to products that:

1. If used on interior, have lower emissions, as defined in Section 016116.
2. If wet-applied, have lower VOC content, as defined in Section 016116.

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 012500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

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

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

**SECTION 017800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Materials transparency manual.
- D. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions and 007300 - Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 013000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
 - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Materials Transparency Manual:
 - 1. Compile and submit a digital and a printed version of information disclosing materials content for interior finishes, furnishings (including workstations), built-in furniture. Meet IWBI (BS) requirements for format and content.
- D. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Addenda.
 - 3. Change Orders and other modifications to the Contract.

- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- B. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- C. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
 - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

- C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

3.06 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

END OF SECTION

SECTION 020342
REMOVAL AND SALVAGE OF PERIOD CONSTRUCTION MATERIALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Work includes deconstruction and salvage of identified historic items and materials and removal of rubbish and debris.
- B. Specified procedures required for preservation, rehabilitation, restoration, and reconstruction treatment areas.

1.02 RELATED REQUIREMENTS

- A. Section 013591 - Period Treatment Procedures for general historic preservation project requirements.

1.03 DEFINITIONS

- A. Debris: Nonhistoric building materials and contents destroyed during demolition.
- B. Deconstruction: Systematic dismantling and removal of a structure or its parts and salvage of elements and components for reuse, recycling, and retaining maximum value.

1.04 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2027.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Deconstruction Crew's Qualification Statement: Documentation of three consecutive years of work of this type, including similar projects identifying when, where, and for whom the work was performed.
 - 1. Include current point-of-contact information for references.
- C. Work Plan: Detailed, proposed instructions for each type of operation of procedures for accomplishment of deconstruction work, including detailed description of the methods and equipment to be used and sequence of operations. Include the following:
 - 1. Extent of deconstruction, removal sequences, temporary and permanent bracing and shoring, and location and construction of barricades and fences.
 - 2. Instructions for removal and disposition of period materials specified to be salvaged or recycled.
 - 3. Protection of property to remain undisturbed.
 - 4. Ensure coordination with other work.

1.06 QUALITY ASSURANCE

- A. Deconstruction Crew Qualifications: Workers trained and experienced in removal and salvage of historic materials.

1.07 FIELD CONDITIONS

- A. Comply with applicable requirements of NFPA 241.
- B. Dust Control: Control dust resulting from removal, salvage, and demolition operations from spreading to occupied portions of the project and creating a nuisance in surrounding area. Use of water to control dust is not permitted when it will result in or create:
- C. Protection of Existing Historic Property: Before beginning removal, salvage, or demolition work, survey the site and examine the drawings and specifications to determine the extent of the work. Take necessary precautions to avoid damage to existing items to remain in place, be reused, or remain Owner's property. Repair or restore to original condition items damaged by

Contractor, using approved means, methods, and techniques. Replace items that cannot be successfully repaired or restored to original condition.

1. Construct and maintain shoring, bracing, and supports required as a result of cutting, removal, or demolition work
 2. Ensure that structural elements are not overloaded.
- D. Store materials to be salvaged or recycled daily, out of contact with the ground, under weathertight covering, in areas designated by Owner, and in the manner direct by Owner.
- E. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 PERIOD TREATMENT, GENERAL

- A. See Section 013591 for special procedure requirements related to elements and features of historical significance and value.

3.02 GENERAL PROCEDURES

- A. Drawings indicating existing construction, building services, and site utilities are based on casual field observation and existing record documents only.
1. Report discrepancies to Architect before disturbing existing historic elements.
 2. Beginning of work constitutes acceptance of existing conditions that are apparent upon examination at that time.
- B. Separate spaces in which removals and salvage operations are conducted from occupied spaces.
1. Provide, erect, and maintain temporary dustproof partitions; see Section 015000.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; exercise care to prevent water and humidity damage.

3.03 ENVIRONMENTAL CONTROLS

- A. Comply with federal, state, and local regulations pertaining to water, air, solid waste, recycling, chemical waste, sanitary waste, sediment, and noise pollution.
- B. Protection of Natural Resources: Preserve the natural resources within the project boundaries or restore to an equivalent condition.
1. Dust Control, Air Pollution, and Odor Control: Prevent creation of dust, air pollution, and odors.
 2. Noise Control: Perform removal operations to minimize noise.

3.04 ITEMS TO BE SALVAGED

- A. General: Salvage elements and components to the maximum extent possible. Maintain a chain of custody of salvaged materials, including the condition of such materials before and after salvage operations.
1. Remove historic items to be salvaged from the structure prior to deconstruction work.
 2. Accomplish removal of salvageable items by hand labor to the maximum extent possible.
 3. Take care not to damage historic portions of the structure scheduled to remain or items identified for salvage.
- B. Wood Elements: Remove intact and salvage wood elements indicated on drawings.

3.05 MATERIALS TO BE REMOVED

- A. Remove existing nonhistoric elements as indicated and as required to allow direct access to period construction elements indicated to be restored or salvaged for reuse.
1. Remove nonhistoric finishes.
 2. Remove items indicated on drawings.
- B. Protect existing historic elements.

1. Prevent movement of structure; provide temporary, removable shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly, minimizing overcutting.

3.06 MATERIALS TO BE RECYCLED

- A. Recycle removed nonhistoric materials to the maximum extent possible. Remove recyclable materials by hand wherever possible.
- B. Recycle items indicated on drawings.

3.07 CLEANING

- A. Upon completion of work, clean dust, dirt, and debris caused by salvage and demolition operations from portions of existing structure to remain and adjacent areas. Remove and transport debris and rubbish in a manner that prevents spillage on streets or adjacent areas. Obey local regulations regarding hauling and disposal.

END OF SECTION

SECTION 024100 DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 015000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 017000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 DEFINITIONS

- A. Demolish: Dismantle, raze, destroy, or wreck any building or structure or any part thereof.
- B. Remove: Detach or dismantle items from existing construction and dispose of them off site, unless items are indicated to be salvaged or reinstalled.
- C. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label and deliver salvaged items to Owner in ready-for-reuse condition.
- D. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for reuse and reinstall where indicated.
- E. Existing to Remain: Designation for existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

1.04 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2027.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Site Plan: Indicate:
 - 1. Areas for temporary construction and field offices.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 3 EXECUTION

2.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 5. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.

6. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements to remain in place and not removed.
1. Provide bracing and shoring.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.

2.02 EXISTING UTILITIES

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

2.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
1. Verify construction and utility arrangements are as indicated.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Maintain weatherproof exterior building enclosure, except for interruptions required for replacement or modifications; prevent water and humidity damage.
- C. Remove existing work as indicated and required to accomplish new work.
1. Remove items indicated on drawings.
- D. Services including, but not limited to, HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications: Remove existing systems and equipment as indicated.
1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. Verify that abandoned services serve only abandoned facilities before removal.
 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
1. Prevent movement of structure. Provide shoring and bracing as required.
 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.

3. Repair adjacent construction and finishes damaged during removal work.
4. Patch to match new work.

2.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

**SECTION 040300
CONSERVATION TREATMENT FOR PERIOD MASONRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cleaning of existing masonry surfaces.
- B. Replacement of existing masonry units.
- C. Repair of damaged existing masonry.
- D. Raking and repointing of existing mortar joints.

1.02 RELATED REQUIREMENTS

- A. Section 013591 - Period Treatment Procedures for general historic preservation project requirements.

1.03 ABBREVIATIONS AND ACRONYMS

- A. NPS: National Park Service, part of U.S. Department of the Interior.
- B. TPS: Technical Preservation Services, part of National Park Service.

1.04 DEFINITIONS

- A. Aggregates: Sand component of mortar.
- B. Biocide: Chemical treatment that inhibits, deters, or controls organic growth typically removed by cleaning following biocide treatment.
- C. Binder: Component of mortar that binds aggregate particles into a cohesive material.
- D. Dispersed Lime Crack Injection: Repair method in which dispersed lime material is injected using a needle or syringe into small cracks ranging in width from hairline to 1/8 inch (3.2 mm).
- E. Consolidant: Chemical product to strengthen loose or deteriorated stone.
- F. Dutchman: Repair method to partially remove deteriorated portion of stone and replace with salvaged or new stone.
- G. In situ: Masonry units and mortar remain in place and are restored without removal.
- H. Lime Wash: Protective surface treatment comprised of calcium hydroxide particles in suspension in water, along with small amounts of calcium carbonate, silica particles, and other minerals.
- I. New Elements: New, nonhistoric materials added to masonry structures to aid in resistance to structural loads or water infiltration.
- J. Patching: Use of substitute repair materials to treat damaged or deteriorated masonry units in situ.
- K. Repointing: Removal of existing mortar joints to specified depth and replacement with mortar matching color, texture, and performance of original mortar, and with water vapor transmission, bond, hardness, and flexibility compatible with original mortar, tested in accordance with ASTM C1713.
- L. Retooling: Chisel is used to recreate surrounding stone texture finish.
- M. Surface Treatment: Application of traditional materials or contemporary chemical products to surface of masonry to provide protection to the masonry and mortar or reduce water infiltration.
- N. Wall System: Masonry structures comprised of different materials but functioning holistically; restoration and cleaning processes should take into account effects on the adjacent materials and the building as a whole.
- O. Saturated Surface Dry (SSD): Condition of masonry after application of water to soak into the capillary pores of the masonry, saturating an area of the masonry, reducing further suction, and

allowing surface water to evaporate, leaving the substrate damp but without a surface film of water.

1.05 REFERENCE STANDARDS

- A. ACI CODE-318 - Building Code for Structural Concrete—Code Requirements and Commentary; 2025.
- B. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2026a.
- C. ASTM C141/C141M - Standard Specification for Hydrated Hydraulic Lime for Structural Purposes; 2014 (Reapproved 2022).
- D. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2026.
- E. ASTM C150/C150M - Standard Specification for Portland Cement; 2024.
- F. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2024.
- G. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2020a.
- H. ASTM C1713 - Standard Specification for Mortars for the Repair of Historic Masonry; 2026.
- I. ASTM D570 - Standard Test Method for Water Absorption of Plastics; 2022.
- J. ASTM D638 - Standard Test Method for Tensile Properties of Plastics; 2022.
- K. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics; 2026.
- L. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 2025.
- M. NPS (THP) - The Secretary of The Interior's Standards For the Treatment of Historic Properties with Guidelines For Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings; 2017.
- N. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2022, with Errata (2024).

1.06 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on cleaning compounds.
- C. Shop Drawings: Indicate setting details of stone. Detail shoring.
- D. Conservation treatment quality control plan.
- E. Restorer's qualification statement.
- F. Mortar testing agency qualification statement.

1.07 QUALITY ASSURANCE

- A. Conservation Treatment Quality Control Plan: Prior to commencing work of this section, receive written approval of plan of proposed masonry restoration and cleaning work. Include the following:
 - 1. Description of dust containment methods.
 - 2. Description protection of surrounding construction and landscaping.
 - 3. Description of sequencing, work procedures, materials, and tools proposed for each conservation treatment.
 - a. Effects of weather variations on sequencing of treatments, construction schedule, and protection of completed work.
 - 4. Survey of original wall layout and datum points and plumb lines for rebuilding masonry.
 - 5. Description of shoring and providing safe working environment.
 - 6. Description of selection methods for deconstruction of individual masonry units and tools and methods for cleaning the masonry for reuse.

7. Description of removal of deteriorated mortar joint.
 8. Description of matching of repair material and compatibility with historic materials.
 9. Description of periodic and final cleaning of masonry surfaces.
 10. Description of masonry removal and matching procedures including, but not limited to, equipment, approach, length of time the masonry will be out of the wall, mapping removal locations, and location where masonry units will be repaired, on-site or off-site.
 11. Description of use of reclaimed masonry units including, but not limited to, setting masonry in its original position and maintaining original bond patterns and joint widths.
- B. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.
1. Maintain one copy of each document on project site.
- C. Mortar Testing Agency Qualifications: Independent firm specializing in performing analysis of historic masonry mortar.
- D. Restorer Qualifications: Company specializing in period masonry restoration with minimum five years of documented experience.
1. Use experienced masons who have demonstrated proficiency with tools on historic structures.

1.08 MOCK-UPS

- A. Restore and repoint existing masonry wall defined as follows and on drawings. Include mortar, accessories, wall openings, and flashings.
1. Repointing Mortar Joints:
 - a. Minimum Dimensions: 12 feet (4 m) long; 2/3 of length for horizontal joints and 1/3 of length for vertical joints.
 - b. Demonstrate cutting out mortar joints, preparation for repointing, and mixing, installing, and curing mortar.
 - c. Prepare and place repointing mortar in accordance with guidance provided in NPS (THP) Preservation Brief 2.
 2. Masonry Removal and Replacement: Remove masonry and replace to match existing dimensions and texture, unless indicated otherwise. Size shall represent typical conditions.
 - a. Set one masonry unit in same location; match joint width and bond pattern, using mortar specified.
 - b. Dry set one unit in opening, set on wood shims for evaluation and approval of preparation conditions.
 - c. Confirm with Architect that replacement masonry units meet specified requirements, and that quantity required for the work has been identified.
 3. Application of Repair Materials:
 - a. Patching: Apply repair material on minimum two masonry units of type scheduled for repair.
 - 1) Demonstrate removal of previous patching and application of new patching on one masonry unit.
 - b. Dutchman: Provide dutchman repairs in two locations, include one that is only cut and prepared for application. Demonstrate qualities of stone insert and workmanship and techniques in dutchman repairs. Do not proceed with other dutchman repairs until repair has been approved by Architect.
 4. Crack Repair: Repair one crack, 24 inches (610 mm) long, for each indicated method.
 5. Surface Treatments: Install minimum 16 sq ft (1.5 sq m) mock-up for each type of surface treatment on each type of substrate to be treated. For water repellents and consolidants, demonstrate the equipment and installation procedure. Allow 48 hours for limewash applications to dry to their final color and appearance.

PART 2 PRODUCTS

2.01 CLEANING MATERIALS

- A. Cleaning Agent: Detergent type.
- B. Poultice Materials: Commercially available or custom-prepared materials that adhere to and peel off paint or other coatings without damaging underlying masonry.
 - 1. Manufacturers:
 - a. Diedrich Technologies, Inc; _____: www.diedrichtechnologies.com/#sle.
 - b. PROSOCO; _____: www.prosoco.com/#sle.
 - c. Or approved equal.
 - d. Substitutions: See Section 016000 - Product Requirements.
 - 2. Water-Based Type: Proprietary, odorless, nonacidic blend of dry absorbent natural or artificial clays and biodegradable detergents, mixed on-site with potable water.

2.02 MORTAR MATERIALS

- A. Hydrated Lime: ASTM C207, Type S.
- B. Portland Cement: ASTM C150/C150M, Type I; color required to match approved color sample.
 - 1. Not more than 0.60 percent alkali.
- C. Water: Clean and free of oils, acids, alkalies, salts, organic materials, or other substances that are deleterious to mortar or metal it comes in contact with.
- D. Sand: ASTM C144.
- E. Mortar Mixing:
 - 1. General Requirements:
 - a. Do not use modern additives unless permitted in writing by Architect.
 - b. Match the historic mortar in color, texture, and tooling.

2.03 MASONRY UNIT MATERIALS

- A. Replacement Facing Brick: Match existing historic brick color, shape, size, texture, and general appearance.
 - 1. Actual size: As indicated on drawings.
 - 2. Special shapes: Molded units as required, unless standard units can be sawn to produce equivalent effect.

2.04 BONDING ADHESIVES

- A. General: Products designed specifically for repairing and bonding masonry.
- B. Cementitious Anchor Grout: Vapor permeable, hydraulic, cement-based grout; no latex, acrylic, or epoxy constituents.
 - 1. Application: For bonding anchors to masonry.
 - 2. Cured Properties:
 - a. Compressive Strength: 4,000 psi (27.58 MPa) to 5,000 psi (34.47 MPa) minimum at 7 days, tested in accordance with ASTM C109/C109M.
- C. Epoxy Anchor Grout: 100 percent solids, moisture-insensitive, low-creep structural adhesive complying with ASTM C881/C881M, Type IV; grade and class selected to comply with manufacturer's recommendations for the application.
 - 1. Application: For bonding anchors to masonry.
 - 2. Cured Properties:
 - a. Tensile Strength: 3,550 psi (24.48 MPa) minimum at 7 days, tested in accordance with ASTM D638.
 - b. Compressive Strength: 9,210 psi (63.50 MPa) minimum at 7 days, tested in accordance with ASTM D695.
 - c. Flexural Strength: 7,947 psi (54.79 MPa) minimum at 7 days, tested in accordance with ASTM D790.

- d. 24 Hour Water Absorption: 0.04 percent maximum, tested in accordance with ASTM D570.
- D. Epoxy Adhesive: Two-component, exterior grade, clear, tintable adhesive with gel viscosity.
 - 1. Cured Properties:
 - a. Tensile Strength: 2,044 psi (14.09 MPa) minimum at 7 days, tested in accordance with ASTM D638.
 - b. Compressive Strength: 8,182 psi (56.41 MPa) minimum at 7 days, tested in accordance with ASTM D695.
 - c. Flexural Strength: 9,896 psi (68.23 MPa) minimum at 7 days, tested in accordance with ASTM D790.

2.05 PAINT REMOVERS

- A. Manufacturers:
 - 1. PROSOCO, Inc; _____: www.prosoco.com/#sle.
 - 2. Or approved equal.
 - 3. Substitutions: See Section 016000 - Product Requirements.
- B. Water-Based: Formulated without methylene chloride or methanol and used for removal of multiple coats of oil-based, water-based, acrylic-based, epoxy-based, urethane-based, elastomeric, and lead-based paints.
 - 1. Formulation: Thixotropic paste or gel.
 - 2. Acidic Type: 2.1 pH.
 - 3. Surface Neutralization After Use: Not required.
 - 4. Restrictions: Not intended by the manufacturer for use on furniture, polished surfaces, or for removal of cementitious coatings.

2.06 ACCESSORY MATERIALS

- A. Mortar Additives: Matching project's existing historic mortars including components to enhance color and texture.

PART 3 EXECUTION

3.01 PERIOD TREATMENT, GENERAL

- A. See Section 013591 for special procedure requirements related to elements and features of historical significance and value.

3.02 EXAMINATION

- A. Verify that surfaces to be cleaned and restored are ready for work of this section.

3.03 EVALUATION AND ASSESSMENT

- A. Begin masonry work after evaluation and analysis of areas to be repaired are completed including, but not limited to, sampling and testing of the existing mortar to determine its composition and qualities.
- B. Do not start repairs until conditions causing masonry deterioration have been identified.
- C. To forestall recurrence of masonry deterioration, correct deterioration-causing conditions prior to start of the restoration work.
- D. Analyze composition of existing historic bedding mortar to provide basis for matching with new mortar.

3.04 PREPARATION

- A. Protect other elements from damage that may result from restoration procedures.
- B. Carefully remove and store identified items located in areas to be restored including, but not limited to, fixtures, fittings, finish hardware, and accessories; reinstall upon completion of restoration work.
- C. Protect nonrestoration areas from restoration areas to prevent damage.

- D. When using liquid cleaning methods, provide drainage devices to prevent runoff over adjacent surfaces, unless those surfaces are impervious to damage from runoff.
- E. Do not allow cleaning runoff to drain into sanitary or storm sewers.

3.05 PAINT REMOVAL

- A. Remove existing coatings to bare substrate or first sound paint layer as indicated.
- B. Removal with Chemical Products: Use products in accordance with manufacturer's instructions.
 - 1. Allow product to dwell on existing surface as recommended by manufacturer or until existing coating shows signs of dissolving. Periodically agitate applied remover product with a stiff bristle brush to improve penetration into existing coating.
 - 2. Ensure that chemicals and coating residue are removed from substrate.
- C. Leave surfaces in clean, residue-free condition, ready for subsequent restoration procedures.

3.06 INSTALLATION

- A. Do not mix or apply materials when the ambient temperature or humidity are outside of range recommended by their manufacturers.
- B. Schedule conservation treatments to be carried out during appropriate environmental conditions to avoid weather-related failures.

3.07 MASONRY UNIT REPLACEMENT

- A. Cut out damaged and deteriorated masonry to prevent damage to adjacent materials.
- B. Support structure as necessary prior to cutting out units.
- C. Cut away loose or unsound, adjoining masonry as directed.
- D. Build in new units for new work as specified in other sections.
- E. Mortar Mix: Color and proportion to match existing.
- F. Ensure that anchors are correctly located and built in.
- G. Install built-in masonry work to match and align with existing, with joints and coursing true and level, faces plumb and in line. Build-in all openings, accessories, and fittings.

3.08 REPOINTING

- A. Cut out loose or disintegrated mortar in joints to minimum 1/2-inch (6 mm) depth or until sound mortar is reached.
- B. Exercise appropriate caution to prevent damage to existing masonry.
- C. When cutting is complete, remove dust and loose material with air jet.
- D. Premoisten joints and apply pointing mortar. Pack tightly in maximum 1/4-inch (6 mm) layers. Form a smooth, compact concave joint to match existing.
- E. Moist cure for 72 hours.

3.09 RESTORATION CLEANING

- A. Preclean surfaces and remove large particles with wood scrapers or nonferrous wire brush.
- B. Perform cleaning and rinsing of exterior masonry only during daylight hours.
- C. Preparatory Exterior Masonry Cleaning: Use safe spray pressures for each type of item to be cleaned.
 - 1. Account for use of detergent and abrasives in cleaning solutions when setting pressure and flow of spray.

3.10 CLEANING

- A. Remove stains, efflorescence, or other excess resulting from the work of this section. Do without delay to avoid penetration and setting.

- B. Remove excess mortar, smears, and droppings as work proceeds and upon completion.
- C. Clean surrounding surfaces.

END OF SECTION

**SECTION 040511
MASONRY MORTARING AND GROUTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Mortar for masonry.
- B. Grout for masonry.

1.02 REFERENCE STANDARDS

- A. ASTM C91/C91M - Standard Specification for Masonry Cement; 2025.
- B. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2026c.
- C. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2026.
- D. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2026.
- E. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2026.
- F. ASTM C476 - Standard Specification for Grout for Masonry; 2023.
- G. ASTM C780 - Standard Test Methods for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2025a.
- H. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2024.
- I. ASTM C1019 - Standard Test Method for Sampling and Testing Grout for Masonry; 2026.
- J. ASTM C1714/C1714M - Standard Specification for Preblended Dry Mortar Mix for Unit Masonry; 2026.
- K. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2022, with Errata (2024).

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Include design mix and indicate whether the Proportion or Property specification of ASTM C270 is to be used. Also include required environmental conditions and admixture limitations.
- C. Samples: Submit two samples of mortar, illustrating mortar color and color range.
- D. Reports: Submit reports on mortar indicating compliance of mortar to property requirements of ASTM C270 and test and evaluation reports per ASTM C780.
- E. Reports: Submit reports on grout indicating compliance of component grout materials to requirements of ASTM C476 and test and evaluation reports to requirements of ASTM C1019.

1.04 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

1.06 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.
- B. Maintain materials and surrounding air temperature to minimum 40 degrees F (5 degrees C) prior to, during, and 48 hours after completion of masonry work.

- C. Maintain materials and surrounding air temperature to maximum 90 degrees F (32 degrees C) prior to, during, and 48 hours after completion of masonry work.

PART 2 PRODUCTS

2.01 MORTAR AND GROUT APPLICATIONS

- A. Mortar Mix Designs: ASTM C270, Property Specification.

2.02 MATERIALS

- A. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
 - 1. Type: Type N.
 - 2. Color: Standard gray.
- B. Mortar Aggregate: ASTM C144.
- C. Grout Aggregate: ASTM C404.
- D. Pigments for Colored Mortar: Pure, concentrated mineral pigments specifically intended for mixing into mortar and complying with ASTM C979/C979M.
 - 1. Color(s): To match Architect's sample(s) when incorporated into specified mix design(s).
- E. Water: Clean and potable.
- F. Bonding Agent: Latex type.

2.03 MORTAR MIXING

- A. Thoroughly mix mortar ingredients using mechanical batch mixer, in accordance with ASTM C270 and in quantities needed for immediate use.
- B. Maintain sand uniformly damp immediately before the mixing process.
- C. Do not use anti-freeze compounds to lower the freezing point of mortar.
- D. If water is lost by evaporation, re-temper only within two hours of mixing.

2.04 GROUT MIXING

- A. Mix grout in accordance with ASTM C94/C94M.
- B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C476 for fine and coarse grout.
- C. Add admixtures in accordance with manufacturer's instructions; mix uniformly.

PART 3 EXECUTION

3.01 PREPARATION

- A. Apply bonding agent to existing concrete surfaces.
- B. Plug clean-out holes for grouted masonry with brick masonry units. Brace masonry to resist wet grout pressure.

3.02 INSTALLATION

- A. Install mortar and grout to requirements of section(s) in which masonry is specified.
- B. Work grout into masonry cores and cavities to eliminate voids.
- C. Do not install grout in lifts greater than 16 inches (400 mm) without consolidating grout by rodding.
- D. Do not displace reinforcement while placing grout.
- E. Remove excess mortar from grout spaces.

3.03 GROUTING

- A. Use either high-lift or low-lift grouting techniques, at Contractor's option, subject to other limitations of Contract Documents.

- B. Perform all grouting by means of low-lift technique. Do not employ high-lift grouting.
- C. Perform grouting by means of high-lift technique, except in locations that mandate use of low-lift grouting technique.
 - 1. Do not use high-lift grouting where size of cavities mandates use of fine grout.
- D. Low-Lift Grouting:
 - 1. Limit height of pours to 12 inches (300 mm).
 - 2. Limit height of masonry to 16 inches (400 mm) above each pour.
 - 3. Pour grout only after vertical reinforcing is in place; place horizontal reinforcing as grout is poured. Prevent displacement of bars as grout is poured.
 - 4. Place grout for each pour continuously and consolidate immediately; do not interrupt pours for more than 1-1/2 hours.

END OF SECTION

**SECTION 060300
CONSERVATION TREATMENT FOR PERIOD WOOD**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Repair of damaged wood components.
- B. Replacement of damaged wood components.
- C. Removal of existing wood finishes and refinishing.

1.02 DEFINITIONS

- A. Consolidant: Chemical product to strengthen loose or deteriorated wood.
- B. Dutchman: Repair method in which deteriorated wood component is removed in part and replaced with salvaged, harvested, or new wood.
- C. In situ: Repair procedure in which wood elements and components remain in place and are repaired without removal from the system they are a part of.
- D. New Elements: New, nonhistoric materials added to wood structures to aid in resistance to structural loads or water infiltration.
- E. Patch: Use of substitute repair materials to treat damaged or deteriorated components in situ.
- F. Surface Treatment: Application of traditional materials or contemporary chemical products to the surface of wood components to provide protection and reduce water infiltration.

1.03 REFERENCE STANDARDS

- A. ASTM D638 - Standard Test Method for Tensile Properties of Plastics; 2022.
- B. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics; 2026.
- C. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials; 2025.
- D. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- E. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.
- F. NELMA (SGR) - Standard Grading Rules for Northeastern Lumber; 2024.
- G. NLGA (SGRNL) - Standard Grading Rules for Canadian Lumber; 2025, with Supplement (2026).
- H. RIS (GR) - Standard Specifications for Grades of California Redwood Lumber; 2019.
- I. SPIB (GR) - Standard Grading Rules; 2021.
- J. WCLIB (GR) - WCLB Standard Grading Rules for West Coast & Imported Softwood Lumber No.18; 2024.
- K. WWPA G-5 - Western Lumber Grading Rules; 2025.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on cleaning compounds.
- C. Shop Drawings: Indicate details of replacement units. Detail shoring and _____.
- D. Manufacturer's Instructions: For cleaning materials, indicate special procedures and conditions requiring special attention.

1.05 QUALITY ASSURANCE

- A. Conservation Treatment Quality Control Plan: Prior to commencing work of this section, receive written approval of plan of proposed wood restoration work. Include the following:

1. Description of methods of dust containment.
 2. Description of methods of protecting surrounding construction and landscape features.
 3. Description of sequencing, work procedures, materials, and tools proposed for each type of conservation treatment.
 - a. Effects of weather variations on sequencing, construction schedule, and protection of completed work.
 4. Survey of original wall layout and datum points and plumb lines for rebuilding wood framing.
 5. Description of methods for shoring and providing a safe working environment.
 6. Description of methods for select deconstruction of individual wood components and methods for cleaning these for reuse.
 7. Description of methods and approach for assuring repair material matching and compatibility with original materials.
 8. Description of deteriorated wood framing removal including equipment, approach, and methodology for reconstruction using replacement framing.
 9. Description of the use of reclaimed wood in the project.
- B. Grading Agency: Certified by ALSC; www.alsc.org.
- C. Restorer Qualifications: Company specializing in period wood restoration with minimum five years of documented experience.
1. Use experienced carpenters and furniture craftspeople who have demonstrated proficiency in properly operating tools on historic elements.

1.06 MOCK-UPS

- A. Restore existing wood framed wall in location indicated including siding, trim, accessories, wall openings, and flashings.
1. Removal and Replacement: Remove deteriorated siding and replace with sound siding. Demonstrate proposed restoration techniques and sequencing.
 2. Repair Material:
 - a. Patching: Apply repair material on two areas, minimum, of wood components of type to be repaired.
 - b. Dutchman: Provide dutchman repairs in two locations including one that is only cut and prepared for application. Indicate wood inserts and techniques. Do not proceed with other dutchman repairs until technique has been approved by Architect.
 3. Paint Removal: Test products and procedures for each type of removal on inconspicuous areas of existing coatings. Allow test areas to dry thoroughly after treatment. Obtain Architect's approval prior to retaining test areas for acceptable work results standards.
 4. Surface Treatments: Provide 16 sq ft (1.5 sq m) mock-up, minimum, for each type of surface treatment on each type of wood substrate to be treated. Indicate tools and procedures for water repellents and consolidants.
 5. New Wood Elements: Install one of each type indicating installation method and finished appearance.
- B. Locate mock-up areas where directed.
- C. Approved restoration mock-up areas, including results of procedures employed, will remain and become the quality standard for work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.
1. Store replacement wood components for interior elements in conditioned, indoor space.

PART 2 PRODUCTS

2.01 REPLACEMENT ROUGH CARPENTRY MATERIALS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.

- B. Moisture Content: S-dry or MC19.
- C. Stud Framing, 2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm):
 - 1. Species: Allowed under referenced grading rules.
 - 2. Species: Douglas Fir-Larch.
 - 3. Grade: No.2.
- D. Joist, Rafter, and Small Beam Framing, 2 by 6 through 4 by 16 (50 by 150 mm through 100 by 400 mm):
 - 1. Species: Douglas Fir-Larch.
 - 2. Grade: No.2.
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No.2 or Standard Grade.
 - 2. Boards: Standard or No.3.
- F. Wood fabricated from old growth timber is not permitted.
- G. Lumber and timbers salvaged from deconstruction of existing buildings or structures are permitted in lieu of sustainably harvested lumber, clean, without nails, and free of paint and finish materials and other contamination; identify source.
 - 1. Where used for structural applications, provide wood regraded by grading agency.

2.02 REPLACEMENT FINISH CARPENTRY MATERIALS

- A. Wood or Wood-Based Materials:
 - 1. Wood fabricated from old growth timber is not permitted.
- B. Lumber Materials:
 - 1. Softwood Lumber: _____ species, _____ sawn, maximum moisture content of 6 percent; with vertical grain, of quality suitable for transparent finish.
 - a. Grading: In accordance with rules certified by ALSC; www.alsc.org.
- C. Quality Standard: Items fabricated in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 12, unless noted otherwise.
- D. Surface Burning Characteristics: Provide materials having fire and smoke properties as required by applicable code.
- E. Exterior Finish Carpentry Items: Matching existing elements.
 - 1. Window Casings and Moldings: Prepare for opaque finish.
 - 2. Window Shutters: Hardwood tenons or dowels; prepare for opaque finish.
 - 3. Cornices: Prepare for opaque finish.
 - 4. Soffits and Fascias: Prepare for opaque finish.
 - 5. Stairs, Balustrades, and Handrails: Prepare for opaque finish.
- F. Stile and Rail Paneling: Matching existing elements.
 - 1. Species: _____.
 - 2. Panel Veneer Cut: _____.
 - 3. Stiles and Rails: 3/4 inch (19 mm).
 - 4. Joints: Fastened with dowels or biscuits.
 - 5. Panels: Raised.
 - 6. Finish: Opaque, field finished.

2.03 CLEANING MATERIALS

- A. Cleaning Agent: Detergent type.

2.04 MOLD REMOVAL MATERIALS

- A. Commercial Mold Removal Agent: Biodegradable, nontoxic, neutral pH formulation of surfactants and 7.5 percent hydrogen solution as active components.

2.05 PAINT REMOVERS

- A. Manufacturers:
 - 1. Dumond Chemicals, Inc; _____: www.dumondchemicals.com/#sle.
 - 2. PROSOCO, Inc; _____: www.prosoco.com/#sle.
 - 3. Or approved equal.
 - 4. Substitutions: See Section 016000 - Product Requirements.
- B. Water-Based: Formulated without methylene chloride or methanol and intended for removal of multiple coats of oil-based, water-based, acrylic-based, epoxy-based, urethane-based, elastomeric, and lead-based paints.
 - 1. Formulation: Thixotropic paste or gel.
 - 2. Neutral Types: 5.5 pH.
 - 3. Acidic Type: 2.1 pH.
 - 4. Surface Neutralization after Use: Not required.

2.06 WOOD REPAIR MATERIALS

- A. Source Limitations: Obtain compatible consolidants and patching and filling compounds from single manufacturer.
- B. Manufacturers:
 - 1. Abatron; _____: www.abatron.com/#sle.
 - 2. Conserve Epoxy; _____: www.conserveepoxy.com/#sle.
 - 3. Or approved equal.
 - 4. Substitutions: See Section 016000 - Product Requirements.
- C. Consolidants:
 - 1. Water Based: Single-component, low-viscosity adhesive to penetrate and restore deteriorated wood.
 - a. Primer for patching and filling compounds.
 - 2. Epoxy Based: Two-component clear epoxy liquid system to penetrate and restore deteriorated wood.
 - a. Formulation: Two-part; resin and hardener.
 - b. Mix Ratio: Recommended by manufacturer.
 - c. Additional Uses: Primer for patching and filling compounds.
 - d. Tensile Strength: 1,460 psi (10.1 MPa), minimum.
 - e. Compressive Strength: 5,210 psi (36 MPa), minimum.
 - f. Flexural Strength: 900 psi (6.2 MPa), minimum.
 - g. Elongation: 84 percent, minimum.
 - h. Products:
 - 1) Abatron; LiquidWood: www.abatron.com/#sle.
 - 2) Or approved equal.
 - 3) Substitutions: See Section 016000 - Product Requirements.
- D. Patching and Filling Compounds:
 - 1. Epoxy Based: Two-part, adhesive system designed to fill voids in wood and be painted, stained, sawed, nailed, planed, sanded carved, and machined like wood.
 - a. Formulation: Two-part; resin putty and hardener putty blend, capable of being mixed by hand.
 - b. Formulation: Two-part; resin paste and hardener paste, capable of being spread to a feather edge.
 - c. Mix Ratio: Recommended by manufacturer.
 - d. Coloration Capability: For patching wood items for transparent finish. Capable of being mixed with stains, dyes, or pigments recommended by manufacturer and approved for appearance by Architect.
 - e. Tensile Strength: 2,500 psi (17.5 MPa), minimum.
 - f. Compressive Strength: 2,300 to 2,800 psi (15.8 to 19.3 MPa), minimum.

- g. Elongation: 4 percent, minimum.
- h. Products:
 - 1) Abatron; WoodEpox: www.abatron.com/#sle.
 - 2) Or approved equal.
 - 3) Substitutions: See Section 016000 - Product Requirements.

2.07 BONDING ADHESIVES

- A. Manufacturers:
 - 1. Abatron; _____: www.abatron.com/#sle.
 - 2. Protective Coatings, Inc; _____: www.pcepoxy.com/#sle.
 - 3. Conserve Epoxy; _____: www.conservepoxy.com/#sle.
- B. General: Products for repairing and bonding wood and wood-based materials.
- C. Epoxy Adhesive: Two-part; clear resin and amber hardener, tintable adhesive with medium viscosity.
 - 1. Cured Properties:
 - a. Tensile Strength: 2,044 psi (14.04 MPa) minimum at 7 days, tested in accordance with ASTM D638.
 - b. Compressive Strength: 8,182 psi (56.41 MPa) minimum at 7 days, tested in accordance with ASTM D695.
 - c. Flexural Strength: 9,896 psi (68.23 MPa) minimum at 7 days, tested in accordance with ASTM D790.

PART 3 EXECUTION

3.01 PERIOD TREATMENT, GENERAL

- A. See Section 013591 - Period Treatment Procedures for special procedure requirements related to elements and features of historical significance and value.

3.02 EXAMINATION

- A. Verify that surfaces to be cleaned and restored are ready for work of this section.

3.03 PREPARATION

- A. Protect surrounding elements from damage that may result due to performance of restoration procedures.
- B. Remove and store removable items located in areas to be restored including, but not limited to, fixtures, fittings, finish hardware, and accessories; reinstall upon completion.
- C. Separate areas to be protected from restoration areas to prevent damage.
- D. Mask or cover adjacent surfaces and permanent equipment. Secure coverings without nails or tapes that leave residue. Do not use impervious sheeting which produces condensation.
 - 1. Use materials that withstand cleaning and restoration procedures.
- E. Cover existing landscaping within work areas with tarpaulins or similar covers during work periods.
 - 1. Provide coverings that allow plants to breathe.
- F. When using liquid cleaning methods, install drainage devices to prevent runoff over adjacent surfaces unless those surfaces are impervious to damage from runoff.
- G. Do not allow cleaning runoff to drain into sanitary or storm sewers.

3.04 IN SITU RESTORATION

- A. Do not mix or apply materials or products when the ambient temperature or humidity are outside range recommended by their manufacturers.
- B. Schedule conservation treatments to avoid weather-related failures.

3.05 PAINT REMOVAL

- A. Remove existing coatings to bare substrate or first sound paint layer as indicated.
- B. Removal with Chemical Products: Use products in accordance with manufacturer's instructions.
 - 1. Vertical Surfaces: From the bottom up, apply undiluted removal product to dry surfaces in thickness recommended by manufacturer.
 - 2. Allow product to dwell on existing surface for time period recommended by manufacturer or until existing coating dissolves. Periodically agitate remover paste with a stiff bristle brush to improve penetration into coating.
 - 3. Exterior Elements: Unless otherwise indicated or recommended by paint remover manufacturer, comply with the following:
 - a. From the bottom up, rinse off remover and existing coating residue using pressure washer with pressure, water flow rate, and spray tip recommended by remover manufacturer.
 - 4. Remove all traces of chemicals and coating residue from substrate.
- C. Leave surfaces in a clean, residue-free condition, ready for subsequent restoration procedures.
- D. Dispose of waste products and residue in accordance with applicable laws and regulations.

3.06 MOLD REMOVAL

- A. Apply removal formulation with foaming sprayer, airless sprayer, HVLP sprayer, pressure sprayer, trigger sprayer, brush, or mop, as required for surfaces being treated.
- B. Apply to contaminated elements and allow surfaces to remain wet minimum 10 minutes to allow remover to penetrate, unless otherwise recommended by chemical manufacturer.
- C. At areas of heavy, persistent contamination, scrub with stiff bristle brush to accelerate cleaning action and work remover deeper into substrate.

3.07 REPLACEMENT ELEMENT INSTALLATION

- A. Match existing elements unless otherwise required for protection of wood materials from the weather and approved by Architect.
- B. Maintain continuity of historic architectural fabric.
- C. Rough Carpentry Elements:
 - 1. Set structural members level and plumb.
 - 2. Provide for erection loads, and temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.
 - 3. Do not field cut or alter structural members without approval of Architect.
- D. Finish Carpentry:
 - 1. Exterior Elements: Coordinate sequence of reinstallation with period treatment sequences of other exterior elements.
 - a. General: Use corrosion-resistant fasteners.
 - b. Set and secure materials and components in place, plumb, and level.
 - c. Scribe to abutting components, with gaps of 1/32 inch (0.79 mm), maximum. Do not use overlay trim to conceal larger gaps.
 - d. Window Shutters:
 - 1) Functional Shutters: Install using original hardware.
 - (a) Shutter Leaf Mounts: Pintles and hinges.
 - (b) Adjust for smooth, unobstructed operation.
 - e. Siding and Exterior Trim: Install with gap widths between pieces matching adjacent, original construction.
 - 1) Do not nail through overlapping pieces.
 - 2) Nails: Stainless steel, high tensile strength aluminum, or hot-dipped galvanized nails with ring or spiral-threaded shanks.

- (a) Nailing: Use casing nails to blind-nail; siding or box nails to face-nail.
 - 3) Drive nails manually; do not use nail guns.
 - 4) Do not over drive nails to prevent distortion of face or splitting of wood element.
- f. Cornices: Fit replacement pieces to remaining elements, with gap widths between pieces matching adjacent, original construction.
- g. Soffits and Fascia: Fit replacement pieces to remaining elements, with gap widths between pieces matching adjacent, original construction.
- h. Stairs, Balustrades, and Handrails: Fit replacement pieces in with remaining elements.
 - 1) Fasten and fit elements with flush joints.
 - 2) Add supports at underside of stair for existing, unstable treads.
- i. Brackets, Finials, and Pediments: Fit replacement pieces to remaining elements, with gap widths between pieces matching adjacent, original construction.
 - 1) Affix to existing elements with adhesives where using fasteners is not consistent with existing historic fabric.
- 2. Field Finishing: Prepare elements for field finishing.
 - a. Preparation: On exposed portions of woodwork remove handling marks or effects of exposure to moisture by sanding exposed surfaces with appropriate grit sandpaper.
 - b. Clean before applying sealer or finish.
 - c. Concealed Surfaces: Prime period woodwork that may be exposed to moisture, such as elements adjacent to exterior concrete or masonry walls.
 - d. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.
 - e. Field Finishing: Finish woodwork to match appearance of adjacent, restored woodwork.

3.08 REPAIR

- A. General: Use corrosion-resistant or nonferrous fasteners. Isolate dissimilar metals from each other.
- B. Consolidation: For wood elements indicated on drawings.
 - 1. Apply consolidant to deteriorated wood by brushing, pouring, or injection, as required.
 - 2. Repeat applications until wood to be consolidated is saturated.
- C. Patching: For wood elements indicated on drawings.
 - 1. Mix patching compound components and colorants as recommended by manufacturer.
 - 2. Mask off areas to be kept free of compound.
 - 3. Apply with putty knife or similar implement into and over areas to be repaired.
 - 4. Sand, plane, and shape repair area after patch has set for time period recommended by manufacturer.
- D. Dutchman Installation: For wood elements indicated on drawings.
 - 1. Items Requiring Transparent Finish: Use wood of the same species, grade, cut, color, and grain.
 - 2. Where indicated or appropriate, use boat- or diamond-shaped wood patches to minimize joint surfaces at 90 degrees to grain direction.
 - 3. Trim and square area of replacement.
 - 4. Check prepared dutchman piece for proper fit.
 - 5. Mix adhesive components as recommended by manufacturer.
 - 6. Spread adhesive thinly on both faces keeping adhesive away from edges to avoid squeezing out.
 - 7. Press dutchman into place.
 - 8. Remove excess adhesive at glue line.

END OF SECTION

**SECTION 061000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sheathing.
- B. Roofing nailers.
- C. Roofing cant strips.
- D. Preservative treated wood materials.
- E. Miscellaneous framing and sheathing.
- F. Concealed wood blocking, nailers, and supports.
- G. Miscellaneous wood nailers, furring, and grounds.

1.02 REFERENCE STANDARDS

- A. ANSI/AWC PWF - Permanent Wood Foundation Design Specification; 2021.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.
- D. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- E. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2024, with Errata.
- F. AWPA M4 - Standard for the Handling, Storage, Field Fabrication and Field Treatment of Preservative-Treated Wood Products; 2026.
- G. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- H. ICC-ES AC38 - Acceptance Criteria for Water-Resistive Barriers; 2016, with Editorial Revision (2021).
- I. ICC-ES AC380 - Acceptance Criteria for Termite Physical Barrier Systems; 2021, with Editorial Revision (2022).
- J. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components; 2025.
- K. PS 1 - Structural Plywood; 2023.
- L. PS 2 - Performance Standard for Wood Structural Panels; 2019.
- M. PS 20 - American Softwood Lumber Standard; 2025.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide technical data on insulated sheathing and application instructions.
- C. Product Data: Submit technical data on wood treatment.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

1.05 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

- B. Manufacturer Warranty: Provide 2-year manufacturer warranty for materials and workmanship commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
1. Species: Douglas Fir-Larch, unless otherwise indicated.
 2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
 3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
 4. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm)):
1. Grade: No. 2.
- D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 (50 by 150 mm through 100 by 400 mm)):
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
1. Lumber: S4S, No. 2 or Standard Grade.
 2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

- A. Roof Sheathing: PS 2 type, rated Structural I Sheathing.
1. Bond Classification: Exterior.
 2. Span Rating: 60.
 3. Performance Category: 3/4 PERF CAT.
- B. Roof Sheathing: Wood structural panels with noncombustible overlayment or coating factory-bonded to interior face of plywood panels.
1. Overlayment Noncombustibility Testing: Comply with ICC (IBC) testing requirements.
 2. Plywood Panels:
 - a. Comply with PS 2.
 - b. Bond Classification: Exposure 1.
 - c. Grade: Structural 1 C-D.
 - d. Sizes: 48 by 96 inches (1220 by 2440 mm).
- C. Wall Sheathing: PS 2 type.
1. Bond Classification: Exterior.
 2. Grade: Structural I Sheathing.
 3. Span Rating: 24.
 4. Performance Category: 5/16 PERF CAT.
 5. Edge Profile: Square edge.

2.04 ACCESSORIES

- A. Metal and Finish of Fasteners:
1. Preservative-Treated Wood:
 - a. Fasteners in permanent wood foundations:
 - 1) Type 304 stainless steel.

- 2) Comply with ANSI/AWC PWF.
- b. Nails, timber rivets, wood screws, and lag screws - general use: Hot-dip galvanized steel complying with ASTM A153/A153M Class D.
 - 1) Exception: See fasteners for permanent wood foundation.
- 2. Untreated Wood: Unfinished steel.
- B. Anchors:
 - 1. Toggle bolt type for anchorage to hollow masonry.
 - 2. Expansion shield and lag bolt type for anchorage to solid masonry or concrete.
 - 3. Bolt or ballistic fastener for anchorage to steel.
- C. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
 - 1. For contact with preservative treated wood in exposed locations, provide minimum G185 (Z550) galvanizing complying with ASTM A653/A653M.
- D. Sill Gasket on Top of Foundation Wall: 3/8 inch (9.5 mm) thick, closed-cell plastic foam.
 - 1. Width: 3-1/2 inches (89 mm).
 - 2. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 30 days of weather exposure.
- E. Termite-Resistant Sill Plate Barrier: Self-adhesive, film-backed barrier with release sheet; adheres to concrete substrates and blocks termite access.
 - 1. Thickness: 68 mil, 0.068 inch (1.7 mm).
 - 2. Termite Resistance: 100 percent when tested in accordance with ICC-ES AC380.
 - 3. Water Vapor Permeance: 0.035 perm (2 ng/(Pa s sq m)), maximum, when tested in accordance with ASTM E96/E96M.
- F. Termite-Resistant Sill Flashing: Self-adhesive membrane; polyethylene film bonded to sealant.
 - 1. Thickness: 40 mil, 0.040 inch (1 mm).
 - 2. Termite Resistance: 100 percent when tested in accordance with ICC-ES AC380.
 - 3. Water Vapor Permeance: 0.035 perm (2 ng/(Pa s sq m)), maximum, when tested in accordance with ASTM E96/E96M.
- G. Termite Shield: Galvanized sheet steel, .125 inch thick (Galvanized sheet steel, ____ mm thick).

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes, AWC (WFCM) Wood Frame Construction Manual, and _____.
- E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

3.04 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.
- B. Provide wood curb at each roof opening except where prefabricated curbs are specified and where specifically indicated otherwise; form corners by alternating lapping side members.

3.05 INSTALLATION OF CONSTRUCTION PANELS

- A. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. Nail panels to framing; staples are not permitted.
- B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

3.06 TOLERANCES

- A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
- B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

3.07 CLEANING

- A. Waste Disposal: See Section 017419 - Construction Waste Management and Disposal.
 - 1. Comply with applicable regulations.
 - 2. Do not burn scrap on project site.
 - 3. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

**SECTION 062000
FINISH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Finish carpentry items.

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards; 2021, with Errata.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data:
 - 1. Provide manufacturer's product data, storage and handling instructions for factory-fabricated units.
- C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect from moisture damage.

PART 2 PRODUCTS

2.01 FINISH CARPENTRY ITEMS

- A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- B. Exterior Woodwork Items:
 - 1. Window Casings and Moldings: Softwood; prepare for paint finish.
 - 2. Soffits and Fascias: Prepare for paint finish.
 - 3. Enclosing Soffit Spaces: As detailed.
 - 4. Handrails: Redwood; prepare for stained and sealed finish.
 - 5. Brackets, Finials, and Pediments: Prepare for paint finish.

2.02 LUMBER MATERIALS

- A. Softwood Lumber: _____ species, _____ sawn, maximum moisture content of 6 percent; with vertical grain, of quality suitable for transparent finish.

2.03 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install custom fabrications in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS) requirements for grade indicated.
- B. Set and secure materials and components in place, plumb and level.
- C. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch (0.79 mm). Do not use additional overlay trim to conceal larger gaps.

3.02 SITE-APPLIED WOOD TREATMENT

- A. Apply preservative treatment to field-cut surfaces in accordance with manufacturer's instructions wherever cuts, holes, sawing, or other fabrication of wood members is required after pressure-preservative treatment.
- B. Apply preservative treatment in accordance with manufacturer's instructions.
- C. Allow preservative to dry prior to erecting members.

3.03 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch (1.6 mm).
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch (0.79 mm).

END OF SECTION

**SECTION 070150.19
PREPARATION FOR RE-ROOFING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Replacement of existing roofing system in preparation for entire new roofing system.
- B. Re-cover of existing roofing system in preparation for entire new roofing system.
- C. Removal of existing flashing and counterflashings.
- D. Temporary roofing protection.

1.02 RELATED REQUIREMENTS

- A. Section 075400 - Thermoplastic Membrane Roofing.

1.03 REFERENCE STANDARDS

- A. ASTM C1153 - Standard Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging; 2023.
- B. ASTM D2178/D2178M - Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing; 2015a (Reapproved 2021).
- C. ASTM D4601/D4601M - Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing; 2004 (Reapproved 2020).

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit for each type of material.
- C. Shop Drawings: Indicate size, configuration, and installation details.

1.05 QUALITY ASSURANCE

- A. Materials Removal Company Qualifications: Company specializing in performing work of type specified with at least three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 FIELD CONDITIONS

- A. Existing Roofing System: EPDM single-ply roofing.
- B. Do not remove existing roofing membrane when weather conditions threaten the integrity of building contents or intended continued occupancy.

PART 2 PRODUCTS

2.01 COMPONENTS

- A. See the following sections for additional information on components relating to this work:

2.02 MATERIALS

- A. Temporary Roofing Protection Materials:
 - 1. Contractor's responsibility to select appropriate materials for temporary protection of roofing areas as determined necessary for this work.
- B. Roofing Recover Materials:
 - 1. Contractor's responsibility to select appropriate materials for roofing re-cover as determined necessary for this work.

2.03 ACCESSORIES

- A. Fasteners: Type and size as required and compatible with existing and new roofing system to resist local wind uplift.

- B. Sheathing Paper: Red rosin paper type, at least 3 lb/100 sq ft (1.36 kg/9.3 sq m).
- C. Base Sheet: Non-perforated, asphalt-coated glass fiber base sheet, Type II in accordance with ASTM D4601/D4601M.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing roof surface has been cleared of materials being removed from existing roofing system and ready for next phase of work as required.

3.02 PREPARATION

- A. Sweep roof surface clean of loose matter.
- B. Remove loose refuse and dispose of properly off-site.

3.03 MATERIAL REMOVAL

- A. Remove only existing roofing materials that can be replaced with new materials the same day.
- B. Remove metal counter flashings.
- C. Scrape roofing gravel from membrane surface without causing serious damage to membrane felts.
- D. Remove damaged portions of roofing membrane, perimeter base flashings, flashings around roof protrusions, pitch pans and pockets, insulation vents, and _____.
- E. Remove damaged insulation and fasteners, cant strips, and blocking.

3.04 INSTALLATION

3.05 PROTECTION

- A. Provide protection of existing roofing system that is not having work performed on it.
- B. Provide temporary protective sheeting over uncovered deck surfaces.
- C. Turn sheeting up and over parapets and curbing. Retain sheeting in position with weights.
- D. Install recover board over existing membrane.

END OF SECTION

SECTION 072100 THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Board insulation and integral vapor retarder at over roof deck and over roof sheathing.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Installation requirements for board insulation over steep slope roof sheathing or roof structure.
- B. Section 072600 - Vapor Retarders: Separate vapor retarder materials.
- C. Section 075400 - Thermoplastic Membrane Roofing: Installation requirements for board insulation over low slope roof deck.

1.03 DEFINITIONS

- A. Mineral Fiber Material Composition: Insulation referred to as mineral fiber block, board, and blanket insulation is composed of fibers from mineral based substances such as rock, slag, or glass and processed from the molten state into fibrous form.
 - 1. Based on type of insulation substance, the material will be referred to as a mineral fiber when having a rock or slag base, and glass fiber with a glass or silica sand base, also considered a mineral.
 - 2. Insulation blankets are flexible units consisting of felted, bonded, or unbonded fibers formed into rolls or flat cut pieces referred to as batts; rolls are simply longer versions of batts.
 - 3. For additional information about mineral fiber and the various classification types, refer to the following reference standards; ASTM C553, ASTM C612, ASTM C665, and ASTM C726.

1.04 REFERENCE STANDARDS

- A. ASTM C165 - Standard Test Method for Measuring Compressive Properties of Thermal Insulations; 2023.
- B. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2024.
- C. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.
- D. ASTM C612 - Standard Specification for Mineral Fiber Block and Board Thermal Insulation; 2025.
- E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.
- F. ASTM C726 - Standard Specification for Mineral Wool Roof Insulation Board; 2024.
- G. ASTM C1136 - Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation; 2023.
- H. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2025.
- I. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.
- J. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components; 2025.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

- C. Shop Drawings: Submit drawings that indicate location of joint or termination detail conditions, conditions of interface with other materials, and setting plan for insulation.
- D. Samples for Verification: Submit two samples 6 by 6 inches (___ by ___ mm) in size illustrating insulation and _____.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- F. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

1.06 FIELD CONDITIONS

- A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.01 APPLICATIONS

- A. Insulation over Roof Deck: Extruded polystyrene (XPS) board.

2.02 FOAM BOARD INSULATION MATERIALS

- A. Expanded Polystyrene (EPS) Board Insulation: Comply with ASTM C578.
 - 1. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
- B. Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces.
 - 1. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
 - 3. Type and Thermal Resistance, R-value (RSI-value): Type IV, 5.0 (0.88), minimum, per 1 inch (25.4 mm) thickness at 75 degrees F (24 degrees C) mean temperature.
 - 4. Complies with fire resistance requirements indicated on drawings as part of an exterior non-load-bearing exterior wall assembly when tested in accordance with NFPA 285.
 - 5. Board Edges: Square.
 - 6. Type and Water Absorption: Type XII, 0.3 percent by volume, maximum, by total immersion.
 - 7. Products:
 - a. DuPont de Nemours, Inc; Styrofoam Brand ____: building.dupont.com/#sle.
 - b. Kingspan Insulation LLC; GreenGuard GG25-LG XPS Insulation Board: www.kingspan.com/#sle.
 - c. Owens Corning Corporation; FOAMULAR Type ____ Extruded Polystyrene (XPS) Insulation: www.owenscorning.com/en-us/#sle.
 - d. Or Approved Equal.
 - e. Substitutions: See Section 016000 - Product Requirements.

2.03 ACCESSORIES

- A. Sheet Vapor Retarder: See Section 072600.
- B. Sheet Vapor Retarder: Black polyethylene film for above grade application, 10 mil, 0.010 inch (0.25 mm) thick.
- C. Tape: Reinforced polyethylene film with acrylic pressure sensitive adhesive.
 - 1. Application: Sealing of interior circular penetrations, such as pipes or cables.
 - 2. Width: Are required for application.
- D. Self-Adhered Transition Flashing: Multipurpose, self-adhered flashing with modified butyl adhesive, polyester fiber top sheet, and polypropylene interlayer.
 - 1. Application: Primerless adhesion for use as through-wall flashings and wall transitions to roof and below-grade systems.
 - 2. Thickness: 45 mil, 0.045 inch (1.14 mm), nominal.
 - 3. Size: 6 inches (152 mm) wide, in rolls 75 feet (23 m) long.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.
- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION OVER LOW SLOPE ROOF DECK

- A. Board Installation Over Roof Deck, General:
 - 1. See applicable roofing specification section for specific board installation requirements.
 - 2. Ensure vapor retarder is clean and dry, continuous, and ready for application of roofing system.
 - 3. Fasten insulation to deck in accordance with roofing manufacturer's written instructions and applicable Factory Mutual requirements.
 - 4. Do not apply more insulation than can be covered with roofing on the same day.

END OF SECTION

**SECTION 073110
SYNTHETIC SHINGLES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Plastic shingles with shake appearance and texture.
- B. Flexible sheet membranes for eave protection, underlayment, and valley protection.
- C. Metal flashing.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Roof sheathing.
- B. Section 076200 - Sheet Metal Flashing and Trim: Edge and cap flashings.
- C. Section 077123 - Manufactured Gutters and Downspouts.
- D. Section 077200 - Roof Accessories: Snow guards.
- E. Section 079200 - Joint Sealants.

1.03 REFERENCE STANDARDS

- A. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2025.
- B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2025.
- C. ASTM D3161/D3161M - Standard Test Method for Wind Resistance of Steep Slope Roofing Products (Fan-Induced Method); 2020 (Reapproved 2025).
- D. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement; 2025.
- E. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2025.
- F. ASTM F1667/F1667M - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2021a.
- G. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi; 2015, with Editorial Revision (2021).
- H. NRCA (RM) - The NRCA Roofing Manual; 2026.
- I. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data indicating material characteristics, performance criteria, and limitations.
- C. Shop Drawings: For metal flashings, indicate specially configured metal flashings, jointing methods and locations, fastening methods and locations, and installation details.
- D. Selection Samples: Submit color chips representing manufacturer's full range of available shingle colors and finishes.
- E. Verification Samples: Set of shingles representing actual product in color, finish, and style, including special shapes and fittings.
- F. Manufacturer's Installation Instructions: Indicate installation criteria and procedures.
- G. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- H. Manufacturer's qualification statement.
- I. Installer's qualification statement.
- J. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 016000 - Product Requirements for additional provisions.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with at least three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 MOCK-UPS

- A. See Section 014000 - Quality Requirements for additional requirements.
- B. Mock-Up: Provide a mock-up for evaluation of shingle installation workmanship, including typical eave, rake, valley, and ridge details.
 1. Mock-Up Size: 4 by 4 feet (1.2 by 1.2 m), minimum.
 2. Do not proceed with remaining work until workmanship has been approved by Architect.
 3. Refinish mock-up area as required to produce acceptable work.
 4. Approved mock-up may be retained as part of this work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store materials with labels intact in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.08 FIELD CONDITIONS

- A. Do not install shingles or eave protection membrane when surface temperatures are below 45 degrees F (7 degrees C).

1.09 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Provide Manufacturer's Standard Warranty:
 1. Materials: Warrant shingles for 50 years against breakage or deterioration that results in leaks under normal weather and use conditions.
 2. Installation: Warrant total roof system, including underlayments, flashings, and other roof components for two years against water penetration.
- C. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 SYNTHETIC SHINGLES

- A. Synthetic or Composite Shingles, Shake Texture: Shingles manufactured from plastic or synthetic composite and approximating appearance of traditional, natural wood shakes.
 1. Fire Resistance: ASTM E108, Class A.
 2. Profile: Upper surface mimics appearance of natural wood shakes, with integral rain gutter, nail holes, and interlocking edge; underside has integral reinforcing ribs, self alignment ledge, and leading edge tabs.
 3. Width: 9 inches (229 mm), nominal.
 4. Length: 22 inches (559 mm), nominal.
 5. Thickness at Butt Edge: 5/8 inch (15.9 mm), nominal.
 6. Thickness at Tip: 1/4 inch (6.4 mm), nominal.
 7. Coursing: Staggered.
 8. Color and Pattern: To be selected by Architect from manufacturer's custom range.
 9. Products:
 - a. Brava Roof Tile; Cedar Shake: www.bravarooftile.com/#sle.

- b. DaVinci Roofscapes, Westlake Royal Building Products; Multi-Width Shake: www.westlakeroyalbuildingproducts.com/#sle.
- c. Shingle profiles to match existing as salvaged from demolition, including but not limited to: hexagonal, scallop, and half-round..
- d. Substitutions: See Section 016000 - Product Requirements.

2.02 SHEET MATERIALS

- A. Underlayment: Asphalt-saturated organic roofing felt, unperforated, complying with ASTM D226/D226M, Type II, No. 30.
- B. Eave Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil, 0.040-inch (1 mm) total thickness, with strippable treated release paper and polyethylene sheet top surface.
- C. Flexible Flashing: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil, 0.040-inch (1 mm) total thickness, with strippable treated release paper and polyethylene sheet top surface.

2.03 METAL FLASHING

- A. Metal Flashing: Provide sheet metal eave edge, gable edge, ridge, ridge vents, open valley flashing, chimney flashing, dormer flashing, and other flashing indicated.
 - 1. Form flashings to profiles as indicated on drawings.
 - 2. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
 - 3. Coat concealed surfaces of flashings with bituminous paint.

2.04 ACCESSORIES

- A. Roofing Nails: Standard round wire shingle type, galvanized steel, stainless steel, aluminum roofing nails, or copper roofing nails, minimum 3/8-inch (9.5-mm) head diameter, 12 gauge, 0.109 inch (2.77 mm) nail shank diameter, 1-1/2 inches (38 mm) long and complying with ASTM F1667/F1667M.
- B. Asphalt Roof Cement: ASTM D4586/D4586M, asbestos-free.
- C. Lap Cement: Fibrated cutback asphalt type, recommended for use in application of underlayment, free of toxic solvents.
- D. Bituminous Paint: Acid and alkali resistant type; black color.
- E. Ridge Vents: Plastic, extruded with vent openings that do not permit direct water or weather entry; flanged to receive shingles.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to beginning this work.
- B. Verify roof openings are correctly framed.
- C. Verify deck surfaces are dry, free of ridges, warps, or voids.

3.02 PREPARATION

- A. Seal roof deck joints wider than 1/16 inch (1.6 mm) as recommended by shingle manufacturer.
- B. At areas where eave protection membrane is to be adhered to substrate, fill knot holes and surface cracks with latex filler.
- C. Broom clean deck surfaces before installing underlayment or eave protection. Remove debris, loose fasteners, and other protrusions from deck surface.
- D. Install eave edge flashings tight with fascia boards. Weather lap joints 2 inches (51 mm) and seal with roof cement. Secure flange with nails spaced ____ inches (____ mm) on center.

3.03 INSTALLATION

- A. Eave Protection Membrane:

1. Install eave protection membrane from eave edge to minimum 4 feet (1.2 m) up-slope beyond interior face of exterior wall.
 2. Install eave protection membrane in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Underlayment:
1. Roof Slopes Greater Than 4:12: Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches (102 mm); stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches (102 mm) over eave protection.
 2. Items Projecting Through or Mounted on Roof: Weather lap and seal watertight with plastic cement.
- C. Valley Protection:
1. Install flexible flashing in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
 2. Weather lap joints minimum 2 inches (51 mm).
 3. At Exposed Valleys: Install one layer of sheet metal flashing, minimum 24 inches (610 mm) wide, centered over open valley and crimped to guide water. Weather lap joints with at least 2-inch (5 mm) wide band of lap cement along each edge of first layer, press roll roofing into cement, and nail in place minimum 18 inches (457 mm) on center and 1 inch (25 mm) from edges.
- D. Metal Flashing:
1. Weather lap joints minimum 2 inches (51 mm) and seal weathertight with plastic cement.
 2. Secure in place with nails at ____ inches (____ mm) on center. Conceal fastenings.
 3. Items Projecting Through or Mounted on Roofing: Flash and seal weathertight with plastic cement.
- E. Shingles:
1. Install shingles in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
 - a. Fasten individual shingles using two nails per shingle, or as required by manufacturer and local building code, whichever is greater.
 - b. Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.
 2. Place shingles in coursing pattern and with maximum weather exposure as indicated to produce double thickness over full roof area, and provide double course of shingles at eaves.
 3. Project first course of shingles 3/4 inch (19 mm) beyond fascia boards.
 4. Extend shingles 1/2 inch (12.7 mm) beyond face of gable edge fascia boards.
 5. Extend shingles on both slopes across valley in a weave pattern and fasten; then extend shingles a minimum of 12 inches (305 mm) beyond valley center line to achieve woven valley, concealing valley protection.
 6. Cap hips with individual shingles, maintaining 5-inch (127 mm) weather exposure, and place to avoid exposed nails.
 7. After installation, place one daub of plastic cement 1-inch (25.4 mm) diameter under each individual shingle tab exposed to weather to prevent lifting.
 8. Coordinate installation of roof mounted components or work projecting through roof with weathertight placement of counterflashings.
 9. Provide weathertight installation.

3.04 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

- B. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

END OF SECTION

SECTION 073113 ASPHALT SHINGLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Asphalt shingle roofing.
- B. Flexible sheet membranes for eave protection, underlayment, and valley protection.
- C. Flashing.

1.02 RELATED REQUIREMENTS

- A. Section 061000 - Rough Carpentry: Roof sheathing.
- B. Section 076200 - Sheet Metal Flashing and Trim: Edge and cap flashings.
- C. Section 077123 - Manufactured Gutters and Downspouts.
- D. Section 077200 - Roof Accessories: Snow guards.

1.03 REFERENCE STANDARDS

- A. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2025.
- B. ASTM D3462/D3462M - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules; 2025.
- C. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement; 2025.
- D. ASTM D6380/D6380M - Standard Specification for Asphalt Roll Roofing (Organic Felt); 2003 (Reapproved 2022).
- E. ASTM D7158/D7158M - Standard Test Method for Wind Resistance of Asphalt Shingles (Uplift Force/Uplift Resistance Method); 2024a.
- F. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- G. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2025.
- H. ASTM F1667/F1667M - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2021a.
- I. ICC-ES AC188 - Acceptance Criteria for Roof Underlayments; 2023.
- J. NRCA (RM) - The NRCA Roofing Manual; 2026.
- K. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data indicating material characteristics, performance criteria, and limitations.
- C. Shop Drawings: For metal flashings, indicate specially configured metal flashings, jointing methods and locations, fastening methods and locations, and installation details.
- D. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern ; for color selection.
- E. Manufacturer's Installation Instructions: Indicate installation criteria and procedures.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
- G. Manufacturer's qualification statement.
- H. Warranty Documentation: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

- I. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements for additional provisions.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacture of roofing systems similar to those required for this project, with not less than 5 years of documented experience.
- B. Installer Qualifications: Company specializing in installing asphalt shingles, with at least 3 years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store materials with labels intact in manufacturer's unopened packaging until ready for installation.
- B. When storing roofing materials on roofing system ensure no damage occurs to supporting members and other materials.

1.07 FIELD CONDITIONS

- A. Do not install shingles, eave protection membrane, underlayment, or _____ when surface, ambient air, wind chill, or _____ temperatures are below 45 degrees F (7 degrees C).

1.08 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Provide 30 year manufacturer's warranty for coverage against black streaks caused by algae.
- C. Provide 5-year manufacturer's warranty for wind damage.
- D. Extended Correction Period: Correct defective work within 2-year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Asphalt Shingles:
 - 1. CertainTeed Roofing; Landmark PRO Solaris: www.certainteed.com/#sle.
 - 2. GAF; Timberline NS Shingles: www.gaf.com/#sle.
 - 3. IKO Industries Inc; _____: www.iko.com/#sle.
 - 4. Or Approved Equal.
 - 5. Substitutions: See Section 016000 - Product Requirements.

2.02 ASPHALT SHINGLES

- A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M.
 - 1. Fire Resistance: Class A, complying with ASTM E108.
 - 2. Wind Resistance (Uplift): Class G, when tested in accordance with ASTM D7158/D7158M.
 - 3. Warranted Wind Speed: Not greater than 115 mph (185 km/h).
 - 4. Self-sealing or interlocking type.
 - 5. Style: Staggered edge butt.

2.03 SHEET MATERIALS

- A. Roll Roofing:
 - 1. Mineral Surfaced Roll Roofing: Asphalt-coated organic felt, mineral granule surfaced, complying with ASTM D6380/D6380M, Class M, Type II, with 2-inch wide selvage (50 mm wide selvage); _____ color.
- B. Eave Protection Membrane:
 - 1. Eave Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil (1 mm) total thickness; with strippable treated release paper and polyethylene sheet top surface.

- C. Eave Edge Starter Shingles: Glass felt base, with ceramic coated mineral granules tightly embedded in refined, water-resistant asphalt, complying with ASTM D3462/D3462M.
 - 1. Shingle Size: 8-3/16 by 38-1/4 inches (208 by 972 mm), nominal.
 - 2. Application: Roof with slope greater than 2 inches per foot (51 mm per 305 mm) and shingle exposure less than 5-5/8 inches (143 mm).
 - 3. Products:
 - a. CertainTeed Roofing; SwiftStart Starter Shingles: www.certainteed.com/#sle.
 - b. GAF; Pro-Start: www.gaf.com/#sle.
 - c. Substitutions: See Section 016000 - Product Requirements.
- D. Underlayment: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams.
 - 1. Type: Woven polypropylene with anti-slip polyolefin coating on both sides.
 - 2. Minimum Requirements: Comply with requirements of ICC-ES AC188 for non-self-adhesive sheet.
 - 3. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
 - 4. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
 - 5. Water Vapor Permeance: Vapor retarder; maximum of 0.1 perm (5.7 ng/(Pa s sq m)), when tested in accordance with ASTM E96/E96M Procedure A, desiccant method.
 - 6. Fasteners: As recommended by manufacturer or building code qualification report or approval.
 - 7. Products:
 - a. CertainTeed Roofing; DiamondDeck Underlayment: www.certainteed.com/#sle.
 - b. GAF; DeckArmor: www.gaf.com/#sle.
 - c. Substitutions: See Section 016000 - Product Requirements.

2.04 FLASHING

- A. Metal Flashings: Provide sheet metal eave edge, gable edge, ridge, ridge vents, open valley flashing, chimney flashing, dormer flashing, and other flashing as indicated.
 - 1. Form flashings to profiles indicated on drawings.
 - 2. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
 - 3. Hem exposed edges of flashings minimum 1/4 inch (6 mm) on underside.

2.05 ACCESSORIES

- A. Roofing Nails: Standard round wire shingle type, galvanized steel, stainless steel, aluminum roofing nails, or copper roofing nails, minimum 3/8-inch (9.5 mm) head diameter, 12-gauge, 0.109-inch (2.77 mm) nail shank diameter, 1-1/2 inches (38 mm) long and complying with ASTM F1667/F1667M.
- B. Asphalt Roof Cement: ASTM D4586/D4586M, asbestos-free.
- C. Bituminous Paint: Acid and alkali resistant type; black color.
- D. Lap Cement: Fibrated cutback asphalt type, recommended for use in application of underlayment, free of toxic solvents.
- E. Snow Guards: See Section 077200.
- F. Plastic Ridge Vents: Extruded plastic with vent openings do not permit direct water or weather entry; flanged to receive shingles.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to starting this work.
- B. Verify roof deck is of sufficient thickness to accept fasteners.
- C. Verify deck surfaces are dry, free of ridges, warps, or voids.

3.02 PREPARATION

- A. Seal roof deck joints wider than 1/16 inch (1.5 mm) as recommended by shingle manufacturer.
- B. At areas where eave protection membrane is to be adhered to substrate, fill knot holes and surface cracks with latex filler.
- C. Install eave edge flashings tight with fascia boards, weather lap joints 2 inches (50 mm) and seal with roof cement, and secure flange with nails spaced ____ inches (____ mm) on center.

3.03 INSTALLATION

- A. Eave Protection Membrane:
 - 1. Install eave protection membrane from eave edge to minimum 24 inches (610 mm) up-slope beyond interior face of exterior wall.
 - 2. Install eave protection membrane in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Underlayment:
 - 1. Roof Slopes Up to 4:12: Install two layers of underlayment over area not protected by eave protection, with ends and edges weather lapped minimum 4 inches (100 mm); stagger end laps of each consecutive layer and nail in place.
 - 2. Roof Slopes Greater Than 4:12: Install underlayment perpendicular to slope of roof, with ends and edges weather lapped minimum 4 inches (100 mm); stagger end laps of each consecutive layer, nail in place, and weather lap minimum 4 inches (100 mm) over eave protection.
 - 3. Weather lap and seal watertight with plastic cement any items projecting through or mounted on roof.
- C. Metal Flashing:
 - 1. Install flashings in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
 - 2. Weather lap joints minimum 2 inches (50 mm) and seal weather tight with plastic cement.
 - 3. Secure in place with nails at ____ inches (____ mm) on center, and conceal fastenings.
 - 4. Items Projecting Through or Mounted on Roofing: Flash and seal weather tight with plastic cement.
- D. Shingles:
 - 1. Install shingles in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
 - a. Fasten individual shingles using two nails per shingle, or as required by manufacturer and local building code, whichever is greater.
 - b. Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.
 - 2. Place shingles in straight coursing pattern with 5-inch (125 mm) weather exposure to produce double thickness over full roof area, and provide double course of shingles at eaves.
 - 3. Project first course of shingles 3/4 inch (19 mm) beyond fascia boards.
 - 4. Extend shingles 1/2 inch (13 mm) beyond face of gable edge fascia boards.
 - 5. Extend shingles on both slopes across valley in a weave pattern and fasten; extend shingles a minimum of 12 inches (300 mm) beyond valley center line to achieve woven valley, concealing valley protection.
 - 6. Cap hips with individual shingles, maintaining 5-inch (127 mm) weather exposure, and place to avoid exposed nails.
 - 7. After installation, place one daub of plastic cement 1-inch (25.4 mm) diameter under each individual shingle tab exposed to weather to prevent lifting.
 - 8. Complete installation to provide weathertight service.

3.04 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.

- B. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

END OF SECTION

**SECTION 074623
WOOD SIDING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wood siding with boards for walls.

1.02 RELATED REQUIREMENTS

- A. Section 054000 - Cold-Formed Metal Framing: Water-resistive barrier under siding.
- B. Section 061000 - Rough Carpentry: Water-resistive barrier under siding.
- C. Section 072500 - Weather Barriers: Water-resistive barrier under siding.
- D. Section 076200 - Sheet Metal Flashing and Trim: Product requirements for metal flashings and trim associated with wood siding for placement by this section.
- E. Section 099113 - Exterior Painting: Prime and finish painting.

1.03 REFERENCE STANDARDS

- A. APA PRP-108 - Performance Standards and Qualification Policy for Wood Structural Panels (Form E445); 2021.
- B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- C. FBC TAS 201 - Impact Test Procedures; Testing Application Standard; 1994.
- D. FBC TAS 202 - Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components Using Uniform Static Air Pressure; Testing Application Standard; 1994.
- E. FBC TAS 203 - Criteria for Testing Products Subject To Cyclic Wind Pressure Loading; Testing Application Standard; 1994.
- F. SPIB (GR) - Standard Grading Rules; 2021.
- G. WCLIB (GR) - WCLB Standard Grading Rules for West Coast & Imported Softwood Lumber No.18; 2024.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's data on materials, component profiles, fastening methods, jointing details, sizes, surface texture, finishes, accessories, and ____; showing compliance with requirements, including:
 - 1. Physical characteristics of components shown on shop drawings.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation instructions and recommendations.
- C. Shop Drawings: Indicate dimensions, layout, joints, construction details, support clips, and methods of anchorage.
- D. Samples: Submit two samples 12 by 12 inches (305 by 305 mm) in size illustrating surface texture.
- E. Manufacturer's qualification statement.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store in ventilated areas with constant minimum temperature of 60 degrees F (16 degrees C) and maximum relative humidity of 55 percent.

1.07 FIELD CONDITIONS

- A. Do not install siding when air temperature or relative humidity are outside manufacturer's limits.

1.08 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Wood Siding:
 - 1. Centennial Woods LLC; _____: www.centennialwoods.com/#sle.
 - 2. Nova USA Wood Products; Thermally Modified Ambara Hardwood: www.novausawood.com/#sle.
 - 3. Thermory USA; Benchmark Ash: www.thermoryusa.com/#sle.
 - 4. UFP Industries: www.ufpi.com/#sle.
 - 5. Or Approved Equal.
 - 6. Substitutions: See Section 016000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

- A. Comply with local wind load resistance requirements of ASCE 7.
- B. Wind-Borne Debris Impact Resistance: Siding assemblies comply with Florida Building Code (FBC) test protocols for High Velocity Hurricane Zone (HVHZ) FBC TAS 201, FBC TAS 202, and FBC TAS 203.
- C. Plywood Sheathing: Comply with APA PRP-108 grade or type standards and labeled by APA certified grading agency.

2.03 WOOD SIDING RAINSCREEN SYSTEM

2.04 WOOD SIDING MATERIALS

- A. Grade lumber in accordance with the following:
 - 1. Western Red Cedar: WCLIB (GR).
- B. Board Siding: Flat, redwood, maximum moisture content of 10 percent.
 - 1. Profile: Lap.
 - 2. Surface Texture: Sanded.
 - 3. Preservative Treatment: Pressure treatment in accordance with AWPA U1, using water borne preservative.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrates are ready to receive work.
- B. Verify that water-resistive barrier has been correctly and completely installed over substrate; see Section 054000.
- C. Do not begin until unacceptable conditions have been corrected.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Protect surrounding areas and adjacent surfaces during execution of this work.
- B. Apply preservative treatment in accordance with manufacturer's instructions.
 - 1. Verify materials do not exceed specified percent moisture content before applying wood preservative treatment.
 - 2. Brush apply one coat of preservative treatment.

3.03 INSTALLATION

- A. Install siding, soffits, batten strips, and trim in accordance with manufacturer's instructions.

- B. Fasten siding securely in place, level and plumb.
 - 1. Arrange for orderly nailing pattern, blind nail except over trim.
 - 2. Install siding for natural shed of water.
 - 3. Position cut ends over bearing surfaces, and sand cut edges smooth and clean.
- C. Install board siding using single course method with ____ inch by ____ inch (____ mm by ____ mm) exposure.
 - 1. Nail at 12 inches (305 mm) on center.
 - 2. Miter horizontal joints tight at 45 degrees, miter external and miter internal corners.
- D. Seal exposed wood substrates exposed to weather to prevent water accumulation and moisture intrusion.
 - 1. Seal penetrations.
 - 2. Seal exposed cuts of siding and trim; use of field-applied coatings is not permitted.
- E. Sand work smooth and set exposed nails and screws.

3.04 TOLERANCES

- A. Maximum Variation from Plumb and Level: 1/4 inch per 10 feet (6 mm/3 m).
- B. Maximum Offset from Joint Alignment: 1/16 inch (1.5 mm).

3.05 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.
- B. Clean exposed work upon completion of installation; remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to finish.

END OF SECTION

**SECTION 075423
THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING - CARLISLE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Mechanically attached thermoplastic polyolefin (TPO) roofing membrane.
- B. Adhered system with thermoplastic polyolefin (TPO) roofing membrane.
- C. Insulation, flat and tapered.
- D. Vapor retarder.
- E. Deck sheathing.
- F. Roofing cant strips, stack boots, roofing expansion joints, and walkway pads.

1.02 REFERENCE STANDARDS

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- B. ASTM C208 - Standard Specification for Cellulosic Fiber Insulating Board; 2022.
- C. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.
- D. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2025.
- E. ASTM D41/D41M - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011 (Reapproved 2023).
- F. ASTM D6878/D6878M - Standard Specification for Thermoplastic Polyolefin-Based Sheet Roofing; 2026.
- G. NRCA (RM) - The NRCA Roofing Manual; 2026.
- H. NRCA (WM) - The NRCA Waterproofing Manual; 2021.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide manufacturer's written information listed below.
 - 1. Product data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
 - 2. Preparation instructions and recommendations.
 - 3. Storage and handling requirements.
- C. Shop Drawings: Indicate joint or termination detail conditions, conditions of interface with other materials, setting plan for tapered insulation, and mechanical fastener layout.
- D. Samples for Selection: Submit two samples 6 x 6" (____ by ____ mm) in size illustrating insulation and colored coating.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- F. Manufacturer's Field Reports: Indicate procedures followed, ambient temperatures, humidity, wind velocity during application, and supplementary instructions given.
- G. Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.
- H. Specimen Warranty: For approval.
- I. Warranty:
 - 1. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
 - 2. Submit installer's certification that installation complies with all warranty conditions for the waterproof membrane.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum twenty (20) years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section:
 - 1. Approved by membrane manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Protect products in weather protected environment, clear of ground and moisture.
- C. Protect foam insulation from direct exposure to sunlight.
- D. Provide Safety Data Sheets (SDS) at the project site at all times during transportation, storage, and installation of materials.
- E. Comply with requirements from Owner to prevent overloading or disturbance of the structure when loading materials onto the roof.

1.06 FIELD CONDITIONS

- A. Do not apply roofing membrane during unsuitable weather. Refer to manufacturer's written instructions.
- B. Do not apply roofing membrane when ambient temperature is below 40 degrees F (5 degrees C) or above ____ degrees F (____ degrees C).
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.
- E. Proceed with work so new roofing materials are not subject to construction traffic as work progresses.
- F. Do not allow grease, oil, fats, or other contaminants to come into direct contact with membrane.

1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Material Warranty: Provide membrane manufacturer's warranty agreeing to replace material that shows manufacturing defects within 10 years after installation.
- C. System Warranty: Provide manufacturer's system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind or other natural causes.
 - 1. Warranty Term: 30 years.
 - 2. For repair and replacement include costs of both material and labor in warranty.
 - 3. Include accidental punctures according to the manufacturer's standard warranty terms.
 - 4. Include hail damage according to the manufacturer's standard warranty terms.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Carlisle SynTec Systems: www.carlisle-syntec.com/#sle.

2.02 ROOFING APPLICATIONS

- A. TPO Membrane Roofing: One ply membrane, asphalt adhered, over insulation.
- B. Roofing Assembly Performance Requirements and Design Criteria:

2.03 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

- A. Base Sheet: Manufacturer's standard, smooth-surfaced, torch-grade, SBS base ply, reinforced with non-woven polyester mat and saturated with asphaltic bitumen and SBS elastomers.

1. Products:
 - a. Carlisle SureMB 70 SA Base Sheet.
- B. Membrane:
 1. Material: Thermoplastic Polyolefin (TPO) complying with ASTM D6878/D6878M.
 2. Reinforcing: Internal fabric.
 3. Thickness: 60 mil (0.060 inch) (1.5 mm), minimum.
 4. Sheet Width: Factory fabricated into largest sheets possible.
 5. Color: White.
 6. Products:
 - a. Carlisle SynTec Systems; Sure-Weld.
- C. Seaming Materials: As recommended by membrane manufacturer.
- D. Membrane Fasteners: As recommended and approved by membrane manufacturer.
 1. Carlisle SynTec Systems; HP-X Fastener: #15 threaded fastener with #3 Phillips drive. Use with Carlisle SynTec Systems Piranha Fastening Plate for mechanically fastened membrane systems on steel or plywood decks.
 2. Base Sheet Fasteners and Plates:
 - a. Carlisle SynTec Systems; Metal Cap: 1 inch (25 mm) diameter metal cap; use with ring shank nails on wood plank, plywood, or oriented strand board.
- E. Vapor Retarder: Material approved by roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials.
 1. Fire-retardant adhesive.
- F. Flexible Flashing Material: Same material as membrane.
- G. Base Flashing: Provide waterproof, fully adhered base flashing system at all penetrations, plane transitions, and terminations.

2.04 DECK SHEATHING AND COVER BOARDS

- A. Cover Board: Polyisocyanurate (ISO) thermal board, complying with ASTM C1289; Type II - Faced with coated-glass facer on both major surfaces of core foam, Class 4 with thickness of 1/2 inch (12.7 mm), and Grade 1 with 109 psi (751 kPa), maximum, compressive strength.
 1. Product: Carlisle SecurShield HD Plus Polyiso.

2.05 INSULATION

- A. Polyisocyanurate (ISO) Board Insulation: Complies with ASTM C1289, Type II, Class 1 - Faced with glass-reinforced felt on both surfaces of core foam.
 1. Grade and Compressive Strength: Grade 2, 20 psi (Grade 2, 138 kPa), minimum.
 2. Board Thickness: 1/2 inch (12.7 mm).
 3. Product: Carlisle InsulBase.

2.06 ACCESSORIES

- A. Prefabricated Flashing Accessories:
 1. Corners and Seams: Same material as membrane, in manufacturer's standard thicknesses.
 - a. Carlisle Sure-Weld TPO Inside Corners; 60 mil, 0.060 inch (1.5 mm) thick.
 - b. Carlisle Sure-Weld TPO Outside Corners; 60 mil, 0.060 inch (1.5 mm) thick.
 - c. Carlisle Sure-Weld TPO T-Joint Covers; 60 mil, 0.060 inch (1.5 mm) thick, 4-1/2 inch (114 mm) diameter.
 - d. Carlisle TPO Curb Wrap Corners; 45 mil, 0.045 inch (1.1 mm) thick, 6 inch (152 mm) wide flange and 12 inch (305 mm) overall height.
 2. Penetrations: Same material as membrane, with manufacturer's standard cut-outs, rigid inserts, clamping rings, and flanges.
 - a. Carlisle SynTec Systems; Sure-Weld TPO Molded Pipe Flashings; for pipes 1 inch to 6 inches (25 mm to 152 mm) in diameter.

3. Sealant Pockets: Same material as membrane, with manufacturer's standard accessories, in manufacturer's standard configuration.
 - a. Carlisle SynTec Systems; Sure-Weld TPO Molded Sealant Pockets: Two piece, interlocking, flexible pockets with rigid polypropylene vertical wall and preformed deck flanges. 6 inches (152 mm) wide and adjustable from 7-1/2 inches (191 mm) to 12 inches (305 mm) long.
4. Pressure Sensitive Cover Strips: 6 inches (152 mm) wide, 45 mil, 0.045 inch (1.1 mm) thick, non-reinforced TPO membrane laminated to 35 mil, 0.035 inch (0.9 mm) thick cured synthetic rubber with pressure sensitive adhesive.
5. Miscellaneous Flashing: Non-reinforced TPO membrane; 80 mil, 0.080 inch (2.0 mm) thick, in manufacturer's standard lengths and widths.
- B. Asphalt Primer: ASTM D41/D41M primer for concrete decks, existing smooth built-up roofing, mineral surfaced cap sheet, or modified bitumen membranes.
- C. Insulation Adhesive: Two-component polyurethane, expanding foam.
 1. Products:
 - a. Carlisle Flexible FAST.
- D. Insulation Fasteners: Appropriate for purpose intended and approved by roofing manufacturer.
 1. Length as required for thickness of insulation material and penetration of deck substrate, with metal washers.
 2. HP-X Fastener: #15 threaded fastener with #3 Phillips drive. Use with Carlisle Piranha Fastening Plate for mechanically fastened membrane systems on steel or plywood decks.
- E. Membrane Adhesive: As recommended by membrane manufacturer.
 1. Carlisle SynTec Systems; Sure-Weld Bonding Adhesive.
 2. Product:
 - a. Carlisle Low VOC Bonding Adhesive.
- F. Surface Conditioner for Adhesives: Compatible with membrane and adhesives.
- G. Sealants: As recommended by membrane manufacturer.
 1. Product:
 - a. Sure-Weld Cut Edge Sealant.
- H. Cleaner: Manufacturer's standard, clear, solvent-based cleaner.
 1. Product: Carlisle Weathered Membrane Cleaner.
- I. Edgings and Terminations: Manufacturer's standard edge and termination accessories.
 1. Snap-On Edge System:

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.
- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

3.02 PREPARATION, GENERAL

- A. Clean substrate thoroughly prior to roof application.
- B. Do not begin work until other work that requires foot or equipment traffic on roof is complete.
- C. Apply manufacturer's recommended vapor retarder or temporary roof before roof installation.

3.03 WOOD DECK PREPARATION

- A. Verify flatness and tightness of joints of wood decking. Verify that all wood decking edges are fully supported. Fill knot holes with latex filler or completely cover with securely nailed sheet metal.
- B. Confirm dry deck by moisture meter with 12 percent moisture maximum.

3.04 INSTALLATION - GENERAL

- A. Perform work in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.
- B. Do not apply roofing membrane during unsuitable weather.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.
- D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

3.05 INSULATION APPLICATION

- A. Apply vapor retarder to deck surface with adhesive in accordance with manufacturer's instructions.
 - 1. Extend vapor retarder under cant strips and blocking to deck edge.
 - 2. Install flexible flashing from vapor retarder to air seal material of wall construction, lap and seal to provide continuity of the air barrier plane.
- B. Lay subsequent layers of insulation with joints staggered minimum 6 inch (152 mm) from joints of preceding layer.
- C. Lay boards with edges in moderate contact without forcing, and gap between boards no greater than 1/4 inch (6.3 mm). Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- D. Do not apply more insulation than can be completely waterproofed in the same day.

3.06 MEMBRANE APPLICATION

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Asphalt Adhered Application: Apply asphalt at manufacturer's recommended rate. Fully embed membrane in adhesive except in areas directly over or within 3 inches (75 mm) of expansion joints. Fully adhere one roll before proceeding to adjacent rolls.
- D. Seam Welding:
 - 1. Seam Welding: Overlap edges and ends and seal seams by heat welding, minimum 2 inches (51 mm).
 - 2. Cover seams with manufacturer's recommended joint covers.
 - 3. Probe seams once welds have thoroughly cooled, in approximately 30 minutes.
 - 4. Repair deficient seams within the same day.
 - 5. Seal cut edges of reinforced membrane after seam probe is complete.
- E. At intersections with vertical surfaces:
 - 1. Extend membrane over cant strips and up a minimum of 4 inches (100 mm) onto vertical surfaces.
 - 2. Fully adhere flexible flashing over membrane and up to nailing strips.
- F. Coordinate installation of roof drains and sumps and related flashings. Locate all field splices away from low areas and roof drains. Lap upslope sheet over downslope sheet.

- G. Daily Seal: Install daily seal per manufacturers instructions at the end of each work day. Prevent infiltration of water at incomplete flashings, terminations, and at unfinished membrane edges.

3.07 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements for general requirements for field quality control and inspection.
- B. Require site attendance of roofing and insulation material manufacturers daily during installation of this Work.

3.08 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.
- B. Remove wrappings, empty containers, paper, and other debris from the roof daily. Dispose of debris in compliance with local, State, and Federal regulations.
- C. Remove bituminous markings from finished surfaces.
- D. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- E. Repair or replace defaced or damaged finishes caused by work of this section.

END OF SECTION

**SECTION 076200
SHEET METAL FLASHING AND TRIM**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, and exterior penetrations.
- B. Sealants for joints within sheet metal fabrications.

1.02 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.
- B. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- C. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2025a.
- D. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- E. ASTM B749 - Standard Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products; 2025.
- F. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).
- G. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2025.
- H. ASTM D1876 - Standard Test Method for Peel Resistance of Adhesives (T-Peel Test); 2008 (Reapproved 2023).
- I. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement; 2025.
- J. CDA A4050 - Copper in Architecture - Handbook; Current Edition.
- K. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
- B. Maintain one copy of each document on site.
- C. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 10 years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sheet Metal Flashing and Trim:
 - 1. Hickman Edge Systems; _____: www.hickmanedgesystems.com/#sle.
 - 2. Or approved equal.

3. Substitutions: See Section 016000 - Product Requirements.

2.02 SHEET MATERIALS

- A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch (0.61 mm) thick base metal.
- B. Stainless Steel: ASTM A666/A666M, Type 304 alloy, soft temper, 28 gauge, 0.0156 inch (0.40 mm) thick; smooth No. 4 - Brushed finish.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- E. Fabricate corners from one piece with minimum 18-inch (450 mm) long legs; seam for rigidity, seal with sealant.
- F. Fabricate flashings to allow toe to extend 2 inches (50 mm) over roofing gravel. Return and brake edges.

2.04 FLASHING

- A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.
- B. Polyvinyl butyral lead or copper replacement flashing with recycled safety foil glass, 118-mil, 0.118-inch (2.98 mm) thick roll in accordance with ASTM D1876.
 - 1. Products:

2.05 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Underlayment: ASTM D226/D226M, organic roofing felt, Type I, No. 15.
- C. Primer Type: Zinc chromate.
- D. Concealed Sealants: Non-curing butyl sealant.
- E. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- F. Asphalt Roof Cement: ASTM D4586/D4586M, Type I, asbestos-free.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted reglets true to lines and levels, and seal top of reglets with sealant.
- C. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil, 0.015 inch (0.38 mm).

3.03 INSTALLATION

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.

- B. Apply plastic cement compound between metal flashings and felt flashings.
- C. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements for field inspection requirements.
- B. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

END OF SECTION

**SECTION 077123
MANUFACTURED GUTTERS AND DOWNSPOUTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Gutters and downspouts.
- B. Downspout boots.
- C. Splash guards.

1.02 RELATED REQUIREMENTS

- A. Section 076200 - Sheet Metal Flashing and Trim.

1.03 REFERENCE STANDARDS

- A. AAMA 611 - Specification for Anodized Architectural Aluminum; 2026.
- B. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2026.
- C. ASTM A48/A48M - Standard Specification for Gray Iron Castings; 2022.
- D. ASTM A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products; 2018 (Reapproved 2024).
- E. ASTM B32 - Standard Specification for Solder Metal; 2020.
- F. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
- G. CDA A4050 - Copper in Architecture - Handbook; Current Edition.
- H. SMACNA (ASMM) - Architectural Sheet Metal Manual; 2012.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on prefabricated components.
- C. Shop Drawings: Indicate locations, configurations, jointing methods, fastening methods, locations, and installation details.
- D. Samples: Two sample assemblies, 12 inches (305 mm) long, illustrating component design, finish, color, and configuration.
- E. Manufacturer's installation instructions.
- F. Executed warranty.

1.05 QUALITY ASSURANCE

- A. Documents at Project Site: Maintain at project site one copy of shop drawings and reference standard documents containing execution requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. See Section 017419 - Construction Waste Management and Disposal for packaging waste requirements.
- B. Stack material to prevent twisting, bending, or abrasion and to provide ventilation. Slope to drain.
- C. Prevent contact with materials that cause discoloration, staining, or damage.

1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

- B. Manufacturer Warranty: Provide 10-year manufacturer warranty for material and workmanship. Complete forms in Owner's name and register with manufacturer.
- C. Finish Warranty: Provide 5-year manufacturer warranty against excessive degradation of exterior PVDF finish. Include provision for replacing units with excessive fading or chalking. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Gutters and Downspouts:
 - 1. ATAS International, Inc: www.atas.com/#sle.
 - 2. Cheney Flashing Company: www.cheneyflashing.com/#sle.
 - 3. Hickman Edge Systems; Wind Resistant Gutter: www.hickmanedgesystems.com/#sle.
 - 4. Or approved equal.
 - 5. Substitutions: See Section 016000 - Product Requirements.

2.02 GUTTERS AND DOWNSPOUTS

- A. Gutters: SMACNA (ASMM) rectangular profile.
- B. Downspouts: Profile as indicated in construction documents.

2.03 DOWNSPOUT BOOTS

- A. Description: Smooth interior without boxed corners or choke points; include integral lug slots and on-body cleanout and cover with neoprene gaskets.
 - 1. Configuration: Angular.
 - 2. Material: Cast iron; ASTM A48/A48M; casting thickness 3/8 inch (10 mm), minimum.
 - 3. Color: As selected by Architect from manufacturer's standard range.
 - 4. Accessories: Manufacturer's standard stainless steel fasteners, stainless steel building wall anchors, and rubber coupling.

2.04 SPLASH GUARDS

- A. Splash Pads: Precast concrete type, profiles sizes as indicated on drawings; minimum 3,000 psi (21 MPa) compressive strength at 28 days, with minimum 5 percent air entrainment.

2.05 SHOP FABRICATION

- A. Form gutters and downspouts of profiles and size indicated in construction documents.
- B. Fabricate with required connection pieces.
- C. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints; comply with CDA A4050
- D. Hem exposed edges of metal.
- E. Fabricate gutter and downspout accessories; seal watertight.

2.06 FINISHES

- A. Prefinished Aluminum Sheets: Factory-applied topcoat systems applied to aluminum flat sheet substrates prior to fabrication by coil coating; topcoat systems consist of primers and organic topcoats on exposed side and backing coats on unexposed side.
 - 1. Aluminum Sheet Substrates: ASTM B209/B209M, alloy and temper as recommended by manufacturer for application.
- B. Prepainted Metallic-Coated Steel Sheets: Factory-applied coatings applied to metallic-coated steel sheet substrates prior to fabrication by coil coating; topcoat systems consist of primers and organic topcoats on exposed top side of sheet; washcoats on bottom unexposed sheet side.
 - 1. Comply with ASTM A755/A755M.

2. Substrate Preparation for Prefinishing: Clean and prepare substrate surfaces in accordance with coating manufacturer's recommendations for substrate type and application.
3. Primer Coats: Provide basecoat primers in accordance with coating manufacturer's recommendations for substrate type, topcoat, and application.
4. Applications: Gutters, scuppers, and downspouts.
 - a. Coating System: High-performance organic coating system.

2.07 MATERIALS

- A. Aluminum Sheet: ASTM B209/B209M; 0.032 inch (0.8 mm) thick.
 1. Finish: Class I anodized.
 2. Color: As indicated on drawings.
- B. Prefinished Aluminum Sheet: ASTM B209/B209M; 0.032 inch (0.8 mm) thick.
 1. Finish: Plain, shop precoated with modified silicone coating.
 2. Color: As selected by Architect from manufacturer's standard colors.
- C. Solder: ASTM B32; Sn50 (50/50) type.

2.08 ACCESSORIES

- A. Flashing: See Section 076200.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify surfaces are acceptable for product installation in accordance with manufacturer's written instructions.
- B. Notify Architect in writing of conditions detrimental to completion of work. Do not proceed with installation until detrimental conditions are corrected.

3.02 PREPARATION

3.03 INSTALLATION

- A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.
- B. Slope gutters 1/4 inch per 10 feet (1:480), minimum.
- C. Connect downspouts to downspout boots at 12 inches (305 mm) above grade. Grout connection watertight.
- D. Set splash pans under downspouts.

END OF SECTION

SECTION 079200 JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Joint backings and accessories.

1.02 REFERENCE STANDARDS

- A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022).
- B. ASTM C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants; 2018 (Reapproved 2022).
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).
- D. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2023.
- E. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.
- F. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.
- G. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints; 2019 (Reapproved 2025).
- H. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).
- I. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Backing material recommended by sealant manufacturer.
 - 4. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 5. Substrates the product should not be used on.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.

1.04 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- D. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.

1. Adhesion Testing: In accordance with ASTM C794.
2. Compatibility Testing: In accordance with ASTM C1087.
3. Allow sufficient time for testing to avoid delaying the work.
4. Deliver sufficient samples to manufacturer for testing.
5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.

PART 2 PRODUCTS

2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
1. Exterior Joints:
 - a. Seal open joints except open joints indicated on drawings as not sealed.
 2. Do Not Seal:
 - a. Intentional weep holes in masonry.
 - b. Joints indicated to be covered with expansion joint cover assemblies.
 - c. Joints where sealant installation is specified in other sections.

2.02 JOINT SEALANTS - GENERAL

- A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

2.03 NONSAG JOINT SEALANTS

- A. Type A - Nonstaining Silicone Sealant: ASTM C920, Grade NS, Uses M, A, G, and O; not expected to withstand continuous water immersion or traffic.
1. Movement Capability: Plus and minus ____ percent, minimum.
 2. Nonstaining to Porous Stone: Nonstaining to light-colored natural stone when tested in accordance with ASTM C1248.
 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
 4. Color: To be selected by Architect from manufacturer's standard range.
 5. Service Temperature Range: Minus 20 to 180 degrees F (Minus 29 to 82 degrees C).
 6. Products:
 - a. Dow; DOWSIL 791 Silicone Weatherproofing Sealant, Carbon Neutral:
www.dow.com/#sle.
 - b. Pecora Corporation; Pecora 864 NST (Non-Staining Technology):
www.pecora.com/#sle.
 - c. Tremco Commercial Sealants & Waterproofing; Tremsil 400:
www.tremcosealants.com/#sle.
 - d. Or approved equal.
 - e. Substitutions: See Section 016000 - Product Requirements.

2.04 ACCESSORIES

- A. Sealant Backing Materials, General: Materials placed in joint before applying sealants; assists sealant performance and service life by developing optimum sealant profile and preventing three-sided adhesion; type and size recommended by sealant manufacturer for compatibility with sealant, substrate, and application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.

- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

- A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Provide joint sealant installations complying with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install bond breaker backing tape where backer rod cannot be used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

3.04 POST-OCCUPANCY

- A. Post-Occupancy Inspection: Perform visual inspection of entire length of project sealant joints at a time that joints have opened to their greatest width, i.e., at low temperature in thermal cycle. Report failures immediately and repair them.

END OF SECTION

**SECTION 099113
EXTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Brick, glass unit masonry, architectural concrete, cast stone, integrally colored plaster and stucco.
 - 7. Glass.
 - 8. Concealed pipes, ducts, and conduits.

1.02 DEFINITIONS

- A. Comply with ASTM D16 for interpretation of terms used in this section.

1.03 REFERENCE STANDARDS

- A. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.
- B. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating; 2023.
- C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).
- D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.
- E. SSPC-SP 13/NACE No.6 - Surface Preparation of Concrete; 2018.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
 - 4. Manufacturer's installation instructions.
 - 5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry and shingle roofing, have been approved.

- D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 5 years experience and approved by manufacturer.

1.06 MOCK-UPS

- A. See Section 014000 - Quality Requirements, for general requirements for mock-up.
- B. Provide panel, 4 feet (____ m) long by 4 feet (____ m) wide, illustrating paint color, texture, and finish.
- C. Mock-up may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.08 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Provide paints and finishes from the same manufacturer to the greatest extent possible.
- C. Paints:
 - 1. Pittsburgh Paints: www.pittsburghpaints.com/#sle.
 - 2. Sherwin-Williams Company; ____: www.sherwin-williams.com/#sle.
 - 3. Or approved equal.
- D. Primer Sealers: Same manufacturer as top coats.
- E. Substitutions: See Section 016000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.

2. Supply each paint material in quantity required to complete entire project's work from a single production run.
3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions.

2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete, brick, primed wood, and primed metal.
 1. Two top coats and one coat primer.
 2. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
 - a. Products:
 - 1) Pittsburgh Paints Acri-Shield Max Exterior Latex, 739-10 Series, Satin. (MPI #15)
 - 2) Sherwin-Williams SuperPaint Exterior.
 - 3) Substitutions: See Section 016000 - Product Requirements

2.04 PRIMERS

- A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
 1. Latex Primer for Exterior Wood; MPI #6.
 - a. Products:
 - 1) Pittsburgh Paints Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer, 17-921XI Series. (MPI #6)
 - 2) Sherwin-Williams Exterior Latex Primer, B42W8141. (MPI #6)
 - 3) Substitutions: See Section 016000 - Product Requirements
 2. Alkyd/Oil Primer for Exterior Wood; MPI #5.
 - a. Products:
 - 1) Pittsburgh Paints Seal Grip Interior/Exterior Alkyd Universal Primer/Sealer, 17-941NF. (MPI #5)
 - 2) Sherwin-Williams Extreme Block Stain Blocking Primer. (MPI #5)
 - 3) Substitutions: Section 016000 - Product Requirements.
 3. Bonding Primer, Water Based; MPI #17.
 - a. Products:
 - 1) KILZ 2 ALL-PURPOSE Interior/Exterior Primer, Sealer, & Blocker [No.2000]. (MPI #17)
 - 2) Pittsburgh Paints Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer, 17-921XI Series. (MPI #17)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop-applied primer for compatibility with subsequent cover materials.
- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 1. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
 2. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.

- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Concrete:
 - 1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
 - 2. Clean surfaces with pressurized water. Use pressure range of 1,500 to 4,000 psi (10,350 to 27,580 kPa) at 6 to 12 inches (150 to 300 mm). Allow to dry.
 - 3. Clean concrete according to ASTM D4258. Allow to dry.
 - 4. Prepare surface as recommended by top coat manufacturer and in accordance with SSPC-SP 13/NACE No.6.
- G. Masonry:
 - 1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
 - 2. Prepare surface as recommended by top coat manufacturer.
 - 3. Clean surfaces with pressurized water. Use pressure range of 600 to 1,500 psi (4,140 to 10,350 kPa) at 6 to 12 inches (150 to 300 mm). Allow to dry.
- H. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.

3.03 APPLICATION

- A. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- F. Wood to Receive Transparent Finishes: Tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

3.06 SCHEDULE - PAINT SYSTEMS

- A. Concrete, Concrete Masonry Units (CMU), Concrete Block, Brick Masonry: Finish surfaces exposed to view.
 - 1. Exterior: CE-OP-3A, flat.
- B. Wood: Finish surfaces exposed to view, _____.
 - 1. Exterior Trim and Frames: WE-OP-3A, semi-gloss.
 - 2. Exterior Siding: WE-OP-3A, flat.

END OF SECTION

