



PROJECT MANUAL

FOR

Buggy Building Waterproofing Restoration

Lee County General Services

SANFORD, NORTH CAROLINA 27565

April 18, 2025

**REI PROJECT NO. R24RAL-057
LEE COUNTY BID NO. 4263-01-26**



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SECTION 00 01 07

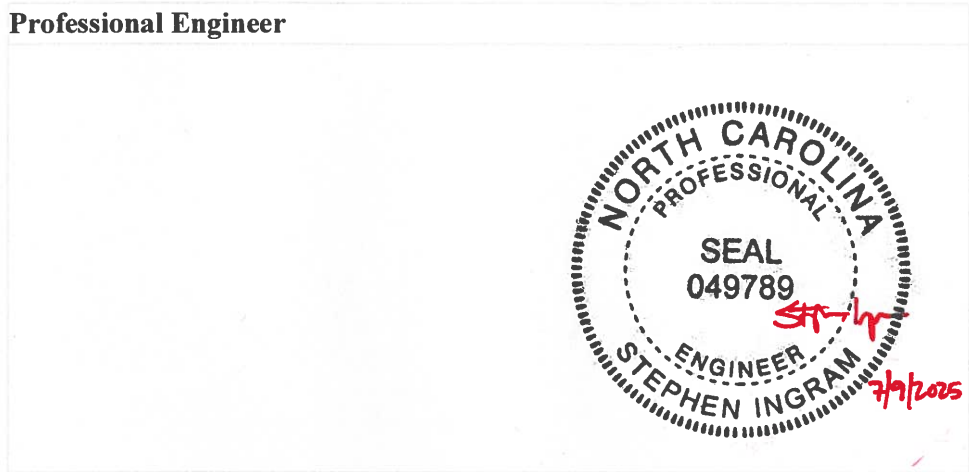
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PART 1 GENERAL

1.01 SUMMARY

- A. Design Firm for Lee County Buggy Building Waterproofing Restoration with Project Manual dated 04-18-2025:
 - 1. Stephen Ingram, 9121 Anson Way, Suite 100, Raleigh, NC 27615.
 - 2. North Carolina Firm License C-1520

Professional Engineer



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END OF SECTION

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PART 1 GENERAL

1.01 SUMMARY

- A. The following drawings dated 04-18-2025 are included as part of the Contract Documents:
1. G-001 Cover
 2. XW101 Site Plan
 3. XW102 Site Plan - Southeast Corner
 4. XW501 Details

END OF SECTION

SECTION 00 11 13

ADVERTISEMENT FOR BIDS

PART 1 GENERAL

1.01 PROJECT INFORMATION

- A. Project Name: Lee County Buggy Building Waterproofing Restoration
- B. Project Address: 115 Chatham Street, Sanford, North Carolina, 27330
- C. Owner: Lee County Government of North Carolina
- D. General Scope of Work: Replace through-wall flashing at southeast corner of the building. Demolish existing concrete sidewalk at southeast corner of the building, install new waterproofing, subgrade, and reinforced concrete sidewalk sloped away from the building with pedestrian traffic deck coating. Perform specified masonry repairs (brick masonry replacement, repointing, etc.) in accordance with project allowances and unit prices. Replace backer rod and sealant between concrete sidewalk on grade and masonry rising walls at full perimeter of the building.

1.02 BIDS

- A. Sealed bids for the project will be received from bidders by the Owner at 115 Chatham Street, Sanford, North Carolina 27330 until 3:00 PM on August 27, 2025, at which time they will be publicly opened and read. Please note that, as stated in Section 00 21 13 Instruction to Bidders, two complete bid packages must be submitted - if only one bid package is submitted the bid will be rejected. Both bid packages may be in one sealed envelope. Please note that Digital submissions are not allowed. Bids should be labeled with bid names and number and mailed or hand delivered to:

Attention Purchasing Agent
Lee County Government of North Carolina
115 Chatham Street, Suite 301
Sanford, NC 27330

1.03 PROJECT DOCUMENTS

- A. Electronic project documents may be obtained from the Engineer, Stephen Ingram, at 9121 Anson Way, Suite 100, Raleigh, NC 27615 and singram@reiengineers.com at no cost.

1.04 BIDDING REQUIREMENTS

- A. All bidders are hereby notified that they shall be properly licensed under the state laws governing their trades.

- B. Bid security in the amount equal to not less than 5% of the gross amount of the bid is required.
- C. A Performance Bond and Payment Bond in the amount of the contract is required.
- D. Submit questions to Stephen Ingram in writing to the Project Manager's email address listed above no later than 5:00 PM at least 7 days prior to the bid due date.

1.05 PRE-BID MEETING

- A. A Pre-Bid Meeting is scheduled for 9:00 AM on August 13, 2025 at the project address listed above.
- B. Attendance is mandatory.

END OF SECTION

SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.01 DEFINITIONS

- A. The Bidding Documents consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Bid Form, and other sample bidding and contract forms.
- B. The proposed Contract Documents consist of the Form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and Addenda issued prior to execution of the Contract.
- C. Definitions set forth in Section 00 72 13 - General Conditions of the Contract for Construction or in other Contract Documents are applicable to the Bidding Documents.
- D. Addenda are written or graphic instruments issued by the Engineer prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- E. A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- F. The Base Bid is 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.
- G. An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- H. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- I. A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.
- J. A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

1.02 BIDS

- A. Submit Bid Form along with required enclosures in a sealed envelope, with the Bidder's name, license number, and project name written on the outside; place this sealed envelope in another envelope and deliver to the Owner at the address specified. Please note that, two complete bid packages must be submitted - if only one bid package is submitted the bid will be rejected. Both bid packages may be in one sealed envelope. Please note that Digital submissions are not allowed.
- B. Bids will be received until the date and time specified at which time they will be publicly opened and read.
- C. Fill in and sign the bid form correctly. Bids that show any omission, alterations of form, additions not called for, conditional Bids, or any irregularities of any kind may be rejected. If erasures are necessary and appear on the forms, each such erasure must be initialed by the person signing the proposal.
- D. Bids that are non-responsive or fail to follow the Instructions to Bidders may be rejected.
- E. No bid may be withdrawn after receipt of Bids for a period of 60 days.

1.03 ACCEPTANCE OF BID (AWARD)

- A. It is the intention of the Owner to award a contract for work under this project to the lowest responsive, responsible Bidder.
- B. The Owner reserves the right to reject any or all Bids, to accept any bid submitted, to waive any formalities, and to negotiate with the low Bidder or Bidders any changes considered necessary or desirable. The Owner reserves the right to reject any Bid when such rejection is in the interest of the Owner to reject the bid of the bidder who has previously failed to perform or to complete on time Contracts of a similar nature; and to reject the bid of a bidder who is not, in the opinion of the Engineer, in a position to perform the Contract.
- C. The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted. Alternates may be accepted at any time during the bid holding period.

1.04 PRE-BID MEETING

- A. Refer to the invitation or advertisement for bids for the date, time and location of the Pre-Bid Meeting.
- B. A Pre-Bid Meeting will be held for purposes of considering questions posed by Bidders. All interpretations and corrections to Contract Documents deriving from this meeting will be documented via Addendum.

1.05 DISQUALIFICATION

- A. The Owner reserves the right to disqualify Bids, before or after opening, upon evidence of collusion with intent to defraud or commit other illegal practices upon the part of the Bidder.

1.06 CONTRACTOR'S LICENSE

- A. All Bidders must have proper licenses for contractors as required by State Law. The Bidder's license number shall be listed on the bid form and on the outside of the inner sealed envelope in which the bid is submitted.

1.07 CONFLICT OF INTEREST

- A. Bidders must disclose in writing with their bid the name of any owner, officer, director, or agent who is also an employee of the Owner.
- B. Bidders must disclose in writing with their bid the name of any employee of the Owner who owns, directly or indirectly, an interest of 5 percent or more in the Bidder's firm or any of its branches or subsidiaries.
- C. By submitting a bid, the Bidder certifies that there is no relationship between the Bidder and any person or entity which is, or gives the appearance of, a conflict of interest related to this project.

1.08 NON-DISCRIMINATION

- A. The Bidder shall not discriminate against any individuals and will take proactive measures to assure compliance with all Federal and State requirements concerning fair employment, employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination based upon age, race, color, religion, sex, national origin, or disability.

1.09 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

- A. Examine Drawings and Specifications and all Addenda or other revisions thereto and thoroughly familiarize himself with the detailed requirements thereof prior to submitting a proposal.
- B. Should a Bidder find discrepancies or ambiguities in, or omissions from the Specifications and Drawings bound herein, or should be in doubt as to their meaning, notify the Engineer in writing immediately. Engineer will issue an interpretation in the form of an addendum. This addendum will be forwarded to all Bidders of record.
- C. Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.
- D. Act promptly and allow sufficient time for a reply to be provided before the date established for submission of Bids.
- E. Acknowledge receipt of all addenda on the Bid Form.
- F. No oral interpretations will be made to any Bidder as to the meaning or intent of the Contract Documents or be effective to modify any of the provisions of the Contract Documents.

1.10 SUBSTITUTIONS

- A. References are made to certain specific products solely to denote the quality standard of the desired product and are not intended to restrict Bidders to a specific brand, make, manufacturer, or name. These products have been noted to assist in establishing material types and acceptable products. Equivalent products will be considered acceptable provided that the approval of the specific product has been given in writing by the Engineer.
- B. Written requests for substitution of equivalent products from prime bidders will be considered if received by the Engineer 14 calendar days prior to the bid opening.
- C. Identify the product or the fabrication or installation method to be replaced in each request. Include related specification sections and drawing number.
- D. Provide complete documentation on both the product specified and the proposed substitution including the following information as appropriate:
 - 1. Comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
 - 2. Samples where applicable or requested.
 - 3. Detailed comparison of significant qualities of the proposed substitution with those of the work specified.
 - 4. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.
- E. Certification by the Bidder or manufacturer that the substitution proposed is equal to or better in every respect to that required by the Contract Documents, and that it will perform equal or superior to product specified in the application indicated. The Bidder waives any right to additional payment or time, which may subsequently become necessary because of the failure of the substitution to perform adequately.
- F. Engineer's Action: The Engineer may request additional information or documentation necessary for evaluation of the request. The Engineer will notify the Bidders of acceptance of the proposed substitution by means of an addendum to the bid documents. If the proposed substitute is accepted through an addendum use the product specified by name. Engineer's Substitution Approval during bidding and subsequent addendums does not void the Bidder's responsibility to submit the required shop drawings and comply with the other contract documents and requirements.

1.11 SITE INVESTIGATION

- A. Examine the site to determine the extent of work involved, size of work, etc., and the conditions under which the work must be staged and performed. Examine the grounds and buildings, utilities and roads and ascertain by any reasonable means conditions that will in any manner affect its work. Ask the Engineer for any additional information that he deems necessary to be fully informed as to exactly what is to be expected prior to submitting a proposal. The drawings have been prepared on the basis of surveys and inspections of the site and physical conditions at the site. This, however, does not relieve the Bidder of the necessity for fully informing itself as to the existing physical conditions. Secure field measurements for quantities upon which proposal is based. Carefully examine the existing conditions as compared to the Contract Documents.
- B. The submission of a bid will be construed as evidence that such an investigation has been made, and no subsequent allowance will be made in this connection on behalf of the bidder for any error or negligence.
- C. Upon arrival at the Project Site, immediately proceed to the main entrance/office and advise the administrative personnel of its presence and purpose. Sign the visitor's log, giving his name, his company and the time and date of the visit.
- D. Inspection of the work areas shall occur between the hours of 7:00 AM and 4:00 PM. No inspections will be conducted on Saturdays, Sundays, or holidays.

1.12 BID SECURITY

- A. Bid bond, deposit of cash or a certified check drawn on a bank or trust company insured by the FDIC in an amount equal to not less than 5% of the gross amount of the bid is required.

1.13 PERFORMANCE BOND AND LABOR AND MATERIALS PAYMENT BOND

- A. A Performance Bond and Payment Bond in the amount of the contract is required. Include the cost of providing Performance Bond and Payment Bond in the Base Bid.

1.14 PRIME CONTRACT

- A. Perform all work under a single prime contract.

1.15 PERMITS, FEES AND TAXES

- A. Secure and pay the costs of licenses, permits and fees for inspections required by City, County and/or State authorities; Social Security and other applicable Local, State and Federal Government taxes, and sales taxes. Include such costs in its bid.

1.16 SUBCONTRACTORS

- A. List names of subcontractors on the Bid Form. Identify work by the general, subcontractor or not applicable for each trade; utilize blank lines to list trades not provided in the table. Do not list suppliers. All blanks must be filled in. Failure to do so may result in bid being declared non-responsive. If there is more than one subcontractor per trade identified below, list all. If no subcontractors are to be utilized, indicate by signing at the appropriate place at the bottom of the table.
- B. A Bidder whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except if the listed subcontractor's bid is later determined by the successful Bidder to be nonresponsible or nonresponsive or the listed subcontractor refuses to enter into a contract for the complete performance of the bid work, or with the approval of the awarding authority, the Owner, for good cause shown by the successful Bidder.
- C. The terms, conditions, and requirements of each contract between the successful Bidder and a subcontractor performing work under a subdivision or branch of work listed in this subsection shall incorporate by reference the terms, conditions, and requirements of the contract between the contractor and the Owner.

1.17 FORM OF AGREEMENT

- A. A sample contract is included in the bid manual (in Section 00 52 13 - Standard Form of Agreement), but a final contract will be negotiated and executed with the selected bidder.

1.18 BIDDER QUALIFICATIONS

- A. Bids will be accepted from Bidders who are regularly engaged in, and licensed to perform, the work they are bidding, which represents a significant portion of their total volume and who perform this work with workers regularly employed on their direct payrolls. Before a bid is considered for award, the Bidder may be requested by the Engineer to submit a statement of facts in detail as to its previous experience in performing similar or comparable work and of its business and technical organization and financial resources available to be used in contemplated work. The Bidder may also be required to submit a statement of facts in detail on his proposed subcontractors as to their previous experience and past performance in performing similar work or comparable work.

END OF SECTION

SECTION 00 41 13

BID FORM

PART 1 GENERAL

1.01 PROJECT AND ITS PARTIES

A. TO:

Ryan Faulk
Lee County Government of North Carolina
115 Chatham Street, Suite 301
Sanford, North Carolina 27330

B. PROJECT:

1. Lee County Buggy Building Waterproofing Restoration
2. REI Project No. R24RAL-057
3. Lee County Bid No. 4263-01-26

C. FROM:

1. Date: _____
2. Bidder: _____
3. Address: _____
4. Phone: _____ Email: _____
5. GC License #: _____ Classification: _____ Limitation: _____

1.02 BASE BID

A. The undersigned, as bidder, hereby declares that the only person or persons interested in this bid as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this bid or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The Bidder further declares that he has examined the site of the work and the contract documents relative thereto dated 04-18-2025 as prepared by REI Engineers, Inc., and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed. The Bidder proposes and agrees if this bid is accepted to contract with the Owner in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools apparatus, means of transportation and labor necessary to complete the construction of the project with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and the Contract Documents, for the sum of:

1. Words: _____
2. Figures: \$ _____.

1.03 ALTERNATES:

A. The undersigned agrees to perform alternative work as described in Section 01 23 00 - Alternates for the sums stated below resulting in additions to or deductions from the base bid stated above. Additions and deductions shall include any modifications of the Work or additional work that may be reasonably included as part of the alternative work. All alternative work is to be completed within the same timeframe as the base bid work. All alternates must be filled out. A zero or no entry after any alternate indicates no cost change to include that Alternate. Alternates may be accepted at any time during the bid holding period. The undersigned acknowledges that failure to complete all information requested in this section may result in the rejection of this bid.

1. Alternate No. 1: Apply fluid applied water repellent at South Elevation masonry walls as specified in Section 07 19 00 - Fluid Applied Water Repellent.
 - a. Words: _____
 - b. Figures: \$ _____.
 - c. Select One: ___ Add or ___ Deduct

1.04 ALLOWANCES:

- A. Include in the Base Bid the \$7,500.00 Contingency Allowance.
- B. Include in the Base Bid the following Quantity Allowances:
 1. Repoint 7,500 LF of Deteriorated Mortar Joint.
 2. Replace 1,000 EA of Cracked, Broken, or Deteriorated Brick Masonry Units.

1.05 UNIT PRICES:

- A. Unit prices quoted and accepted shall apply throughout the life of the contract, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes in the scope of the work all in accordance with the contract documents.
 1. Repoint Deteriorated Mortar Joint: \$ _____ per LF
 2. Replace Cracked, Broken, or Deteriorated Brick Masonry Units:
\$ _____ per EA.

1.06 BID HOLDING TIME AND ACCEPTANCE:

- A. The undersigned hereby agrees that this bid may not be revoked or withdrawn after the time set for the opening of bids but shall remain open during the bid holding period as specified in Section 00 21 13 - Instructions to Bidders.

1.10 ENCLOSURES:

- A. Provide the following enclosures with submitted bid:
 - 1. Bid Bond
 - 2. Minority, Woman, and Small Business Enterprises Submittals as required by Section 00 43 39 "Minority Business Enterprise":
 - a. MWSBE Identification Form
 - b. State of North Carolina Affidavit A – Listing of the Good Faith Effort
or
State of North Carolina Affidavit B – Intent to Perform Contract with Own Workforce
 - 3. Response/Travel Time Documentation

1.11 SUBMITTED BY:

- A. Contractor Name: _____
- B. Authorized Signing Officer Name: _____
- C. Authorized Signing Office Title: _____
- D. Signature: _____
- E. Respectfully submitted this _____ day of _____, 20__

1.12 NOTARIZED BY:

- A. I, _____ (print name), a Notary Public for _____ County of _____ (State), do hereby certify that _____ (officer listed above) personally appeared before me this day and acknowledged the due execution of the foregoing instrument. Witness my hand and official seal, this _____ day of _____, 20 __. My commission expires ___ of _____, 20 __.
- B. Signed: _____

(OFFICIAL SEAL)

END OF SECTION

SECTION 00 43 13

BID BOND FORM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Utilize AIA Document A310 - 2010 Bid Bond Form. Document is incorporated by reference, Contractor is responsible to obtain a properly licensed form for use on the project.

1.02 RELATED DOCUMENTS

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

1.03 BID SECURITY

- A. In lieu thereof, each bid may be accompanied by a deposit of cash or a certified check drawn on a bank or trust company insured by the Federal Deposit Insurance Corporation (FDIC) in an amount equal to not less than 5% of the gross amount of the bid.
- B. Bid Bond shall be signed by the Bidder and notarized.
- C. If the successful Bidder fails to execute the contract within 10 days after award, the above deposit will be retained by the Owner on the bid bond executed on liquidated damages.

END OF SECTION

SECTION 00 43 39

MINORITY BUSINESS ENTERPRISE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Guidelines for Recruitment and Selection of Minority Businesses for Participation in Construction Contracts.

1.2 RELATED DOCUMENTS

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

END OF SECTION

EXHIBIT D

**LEE COUNTY'S MINORITY BUSINESS/HISTORICALLY
UNDERUTILIZED BUSINESS
PARTICIPATION OUTREACH PLAN AND GUIDELINES**

SECTION A. INTENT

SECTION B. DEFINITIONS

SECTION C. MINORITY OUTREACH PLAN AND GUIDELINES

SECTION D. MINIMUM COMPLIANCE REQUIREMENTS

SECTION E. DISPUTE RESOLUTION PROCEDURES

SECTION F. BID PACKET PROVISIONS

SECTION G. INFORMAL BIDDING STATUTE

SECTION H. AFFIDAVITS FOR BIDDERS

SECTION I. BID PACKET COVERSHEET

OUTREACH PLAN AND GUIDELINES FOR RECRUITMENT AND SELECTION OF MINORITY BUSINESSES FOR PARTICIPATION IN LEE COUNTY BUILDING CONSTRUCTION OR REPAIR CONTRACTS

N.C.G.S. 143-128.2 requires that a local government unit or other public or private entity that receives State appropriations for a building project or other State grant funds for a building project, including a building project done by a private entity on a facility to be leased or purchased by the local government unit, where the project cost is one hundred thousand dollars (\$100,000) or more, shall have a verifiable ten percent (10%) goal for participation by minority businesses in the total value of the work. A verifiable goal is also required for building projects costing three hundred thousand dollars (\$300,000) or more when no state funds are involved. The outreach plan shall also be applicable to the selection process of architectural, engineering, and Construction Manager-at-Risk services, unless otherwise exempted.

Lee County has a current verifiable goal of 10% percent for minority participation for building construction or repair projects. The goal will be reviewed annually or as soon as relevant data is available.

SECTION A: INTENT

It is the intent of these guidelines that Lee County, as awarding authority for building construction or repair projects, and the contractors and subcontractors performing the construction contracts awarded shall cooperate and in good faith do all things legal, proper, and reasonable to achieve the goal of 10% percent for participation by minority businesses in each building construction or repair project as required by GS 143-128.2. Nothing in these guidelines shall be construed to require contractors or awarding authorities to award contracts or subcontracts to or to make purchases of materials or equipment from minority-business contractors or minority-business subcontractors who do not submit the lowest responsible, responsive bid or bids. Lee County wants to provide historically underutilized businesses opportunities to participate in bidding opportunities.

SECTION B: DEFINITIONS

1. Minority - a person who is a citizen or lawful permanent resident of the United States and who is:
 - a. Black, that is, a person having origins in any of the black racial groups in Africa;
 - b. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
 - c. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, the Pacific Islands;
 - d. American Indian, that is, a person having origins in any of the original peoples of North America; or
 - e. Female
 - f. Disabled, that is, a person with a disability as defined in N.C.G.S. 168-1 or N.C.G.S. 168A-3
 - g. Disadvantaged, that is, a person who is socially and economically disadvantaged as defined in 15 U.S.C. Section 637

2. Minority Business (MBE) – According to N.C.G.S. 143-128.4, minority business or historically underutilized business is a business that meets the following conditions:
 - a. In which at least fifty-one percent (51%) is owned by one or more persons who are members of at least one of the groups set above, or in the case of a corporation, in which at least fifty-one percent (51%) of the stock is owned by one or more minority persons or socially and economically disadvantaged individuals; and
 - b. Of which the management and daily business operations are controlled by one or more of the minority persons or socially and economically disadvantaged individuals who own it.

3. Socially and economically disadvantaged individual - means the same as defined in 15 U.S.C. 637: Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.

4. Economically disadvantaged individuals -those socially disadvantaged individuals whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged.

5. Disability- according to N.C.G.S. 168A-3 is a person who has a physical or mental impairment which substantially limits one or more major life activities, has a record of such an impairment or is regarded as having such an impairment. As used, the term:

a. Physical or mental impairment means (i) any physiological disorder or abnormal condition, cosmetic disfigurement, or anatomical loss, caused by bodily injury, birth defect or illness, affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hemic; and lymphatic; skin; and endocrine; or (ii) any mental disorder, such as mental retardation, organic brain syndrome, mental illness, specific learning disabilities, and other developmental disabilities, but (iii) excludes (A) sexual preferences; (B) active alcoholism or drug addiction or abuse; and (C) any disorder, condition or disfigurement which is temporary in nature leaving no residual impairment.

b. Major life activities means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working

c. Has a record of such an impairment means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits major life activities

d. Is regarded as having an impairment means (i) has a physical or mental impairment that does not substantially limit major life activities but that is treated as constituting such a limitation, (ii) has a physical or mental impairment that substantially limits major life activities because of the attitudes of others, or (iii) has none of the impairments defined above, but is treated as having an impairment

4. Owner – Lee County.

5. Designer – Any person, firm, partnership, or corporation which has contracted with Lee County to perform architectural or engineering work.

6. Bidder - Any person, firm, partnership, corporation, association, or joint venture seeking to be awarded a public contract or subcontract.

7. Contract - A mutually binding legal relationship or any modification thereof obligating the seller to furnish equipment, materials, or services, including construction, and obligating the buyer to pay for them.

8. Contractor - Any person, firm, partnership, corporation, association, or joint venture which has contracted with Lee County to perform building construction or repair work.

9. Subcontractor - A firm under contract with the prime contractor or construction manager at risk for supplying materials or labor and materials and/or installation. The subcontractor may or may not provide materials in his subcontract.

SECTION C: MINORITY OUTREACH PLAN AND GUIDELINES

Owner

Lee County will employ the following strategies to encourage participation from MBEs.

1. Place emphasis on the importance of soliciting certified MBE firms for subcontracting opportunities at pre-bid conferences and in the bid documents. Examine specifications to identify special subcontracting opportunities and strongly encourage prime contractors to solicit bids for subcontracts from MBE firms.
2. Provide detailed information to majority contractors concerning the bidding and good faith efforts requirements by holding meetings with the contractors.
3. Assess the effectiveness of the MBE program, and identify opportunities to enhance it by evaluating MBE participation and compliance and reviewing the good faith efforts provided in bid packages.

4. Build new and strengthen existing business relationships through networking. Continue communicating with other North Carolina public agencies to find out how their MBE outreach programs are working and to share “best practices” and ideas to improve programs.
5. Participate in educational opportunities throughout the community as they become available and offer training sessions to share Lee County’s outreach plan with interested businesses and organizations
6. Enhance Lee County’s web page by including the outreach plan and guidelines, listing good faith efforts, creating links to MBE resources, and creating awareness of specific subcontracting opportunities.
7. Maintain or continue to maintain a database specifically for MBE firms and majority contractors to ensure those firms wishing to do business with Lee County have access to up-to-date information.
8. Advertise upcoming bid opportunities on the State HUB website.
9. Work with architects and engineers to make subcontracting opportunities more noticeable and more easily understood by potential contractors and subcontractors.

Designer

Under the single-prime bidding, separate prime bidding, construction manager at risk, or alternative contracting method, the designer will:

1. Attend the scheduled pre-bid conference to explain minority business requirements to the prospective bidders.
2. Assist the owner to identify and notify prospective minority business prime and subcontractors of potential contracting opportunities.
3. Maintain documentation of any contacts, correspondence, or conversation with minority business firms made in an attempt to meet the goals.
4. Review jointly with the owner, all requirements of G.S. 143-128.2(c) and G.S.143-128.2(f) – (i.e. bidders’ proposals for identification of the minority businesses that will be utilized with corresponding total dollar value of the bid and affidavit listing good faith efforts, or affidavit of self-performance of work, if the contractor will perform work under contract by its own workforce) - prior to recommendation of award.
5. During construction phase of the project, review documentation for contract payment to MBEs (e.g. state form “Appendix E: MBE Documentation for Contract Payment”) for compliance with minority business utilization commitments. Submit this form with monthly pay applications to the Owner.

Prime Contractor(s), CM at Risk, and Its First-Tier Subcontractors

Under the single-prime bidding, the separate-prime bidding, construction manager at risk, and alternative contracting methods, contractor(s) will:

1. Attend the scheduled pre-bid conference.
2. Identify or determine those work areas of a subcontract where minority businesses may have an interest in performing subcontract work.
3. During the bidding process, comply with the owner’s requirements listed in the proposal for minority participation.
4. Identify on the bid the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).
5. Make documentation showing evidence of implementation of Prime Contractor, CM-at-Risk and First-Tier Subcontractor responsibilities available for review by Lee County, upon request.
6. Upon being named the apparent low bidder, the bidder shall provide one of the following: (1) an affidavit that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal; or (2) if the percentage is not equal to the applicable goal, then documentation of all good faith efforts taken to meet the goal. The documentation must include evidence of all good faith efforts that were implemented including any advertisements, solicitations, and evidence of other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract. Failure to comply with

these requirements is grounds for rejection of the bid and award to the next lowest responsible and responsive bidder.

7. The contractor(s) shall identify the name(s) of minority business subcontractor(s) and corresponding dollar amount of work on the schedule of values.
8. The contractor(s) shall submit with each monthly pay request(s) and final payment(s) documentation for contract payment to MBEs (e.g. state form "Appendix E: MBE Documentation for Contract Payment" for designer's review.
9. During the construction of a project, at any time, if it becomes necessary to replace a minority business subcontractor, immediately advise the owner in writing, of the circumstances involved. The prime contractor shall make a good faith effort to replace a minority business subcontractor with another minority business subcontractor.
10. If during the construction of a project additional subcontracting opportunities become available, the contractor shall make a good faith effort to solicit sub-bids from minority businesses.

Minority Business Responsibilities

Certification

Lee County does not certify minority businesses. Lee County requires certification for minority, disadvantaged or women-owned businesses. Any business that desires to participate as an MBE will be required to complete and submit for certification, documents required by any of the agencies listed below. Only those firms holding current certification through at least one of the following agencies will be considered eligible for inclusion in meeting the MBE participation percentage goals:

North Carolina Department of Administration Historically Underutilized Business (HUB) certification

North Carolina Department of Transportation Disadvantaged Business Enterprise (DBE)

North Carolina Department of Transportation Minority Business Enterprise (MBE)

North Carolina Department of Transportation Women Business Enterprise (WBE) Business Certification

Small Business Administration 8(a) certification

Other governmental agencies on a case-by-case basis

Other Responsibilities

Minority businesses that are contacted by owners or bidders must respond promptly whether or not they wish to submit a bid.

SECTION D: MINIMUM COMPLIANCE REQUIREMENTS

All written statements or affidavits made by the bidder shall become a part of the agreement between the Contractor and Lee County for performance of the contract. Failure to comply with any of these statements, affidavits, or with the minority business guidelines shall constitute a breach of the contract. A finding by Lee County that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false, or incomplete shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of Lee County whether to terminate the contract for breach.

In determining whether a contractor has made good faith efforts, Lee County will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, diligence, and results of these efforts. Contractors are required to earn at least 50 points for good faith efforts. Failure to file a required affidavit or documentation demonstrating that the contractor made the required good faith effort, is grounds for rejection of the bid. Good faith efforts include:

1. Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed. (10 points)

2. Making the construction plans, specifications, and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bid or proposals are due. (10 points)
3. Breaking down or combining elements of work into economically feasible units to facilitate minority participation. (15 points)
4. Working with minority trade, community, or contractor organizations identified by the Office for Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses. (10 points)
5. Attending any pre-bid meetings scheduled by the public owner. (10 points)
6. Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors. (20 points)
7. Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Reasons for rejection of a minority business based on lack of qualification should be documented in writing. (15 points)
8. Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit. (25 points)
9. Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible. (20 points)
10. Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash flow demands. (20 points)

SECTION E: DISPUTE RESOLUTION PROCEDURES

Pursuant to G.S. 143-128 (f1), all disputes involving contractors on a building construction or repair project with Lee County shall be resolved pursuant to Lee County's Dispute Resolution Policy (Exhibit E).

SECTION F: In addition to these guidelines, there will be issued with each construction bid package provisions for providing minority business participation in the Lee County projects.

SECTION G: INFORMAL BIDDING STATUTE

All public entities shall solicit minority participation in contracts for the erection, construction, alteration or repair of any building awarded pursuant to this section. The public entity shall maintain a record of contractors solicited and shall document efforts to recruit minority business participation in these contracts. Nothing in this section shall be construed to require formal advertisement of bids. All data, including the type of project, total dollar value of the project, dollar value of minority business participation on each project, and documentation of efforts to recruit minority participation shall be reported to the Department of Administration, Office of Historically Underutilized Business, upon the completion of the project. Department Heads must work with the Development Services Director who will report the MWBE information to the Office of Historically Underutilized Business.

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

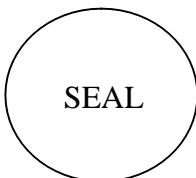
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

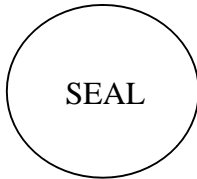
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
 This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
 (Name of Bidder)

_____ (Project Name)
 Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

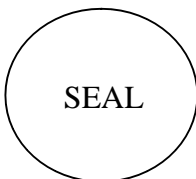
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina

AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify
that on the _____
(Name of Bidder)

_____ (Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.

I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

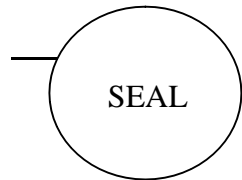
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

SECTION I

MINORITY BUSINESS CONSTRUCTION CONTRACT PROVISIONS INSTRUCTIONS FOR BIDDING PACKETS

APPLICATION:

The Outreach Plan and Guidelines for Recruitment and Selection of Minority Owned Businesses for Participation in Lee County contracts are hereby made a part of these contract documents.

MINORITY BUSINESS SUBCONTRACT GOALS:

The goal for participation by minority firms as subcontractors on this project has been set at 10%.

The bidder must identify on its bid the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts or affidavit (Affidavit B) of self-performance of work, if the bidder will perform work under contract by its own workforce, as required by N.C.G.S. 143-128.2(c) and 143-128.2(f).

In addition, the lowest responsible, responsive bidder must do one of the following:

1) Provide Affidavit C that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal.

OR

2) If the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, is less than the applicable goal, provide Affidavit D as well as documentation of good faith efforts.

OR

3) Provide Affidavit B, which includes sufficient information for the Owner to determine that the bidder does not customarily subcontract work on this project.

The above information must be provided as required. Failure to submit these documents is grounds for rejection of the bid.

SECTION 00 43 39

STANDARD FORM OF AGREEMENT

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Guidelines for Recruitment and Selection of Minority Businesses for Participation in Construction Contracts.

1.02 RELATED DOCUMENTS

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

SECTION 00 52 13

STANDARD FORM OF AGREEMENT

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Owner's Standard Form of Agreement.

1.02 RELATED DOCUMENTS

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

Contract Agreement Between _____ and Lee County Government

THIS AGREEMENT, made the _____ day of ___ month ___ 202__ by and between _____ (hereinafter referred to as the “Contractor”) and Lee County Government (hereinafter referred to as the “Owner”) agree as follows:

1. Scope of Work: The Contractor shall furnish and deliver all of the materials, and perform all of the work in the manner and form as provided by the enumerated plans, specifications and documents, which are attached hereto and made a part thereof as if fully contained herein: advertisement, Instructions to Bidders, General Conditions, Supplementary General Conditions, specifications, accepted proposals, contract, performance bond, payment bond, power of attorney, worker’s compensation, public liability, Exhibit A – Lee County Dispute Resolution Policy, any and all addendums, and all drawings.
2. The Contractor shall commence work to be performed under this agreement on a date to be specified in a written order of the Owner and shall fully complete all work hereunder within _____ consecutive calendar days from said date. For each day in excess thereof, liquidated damages shall be as stated in as \$1,000.00 per day. The Contractor, as one of the considerations for the awarding of this contract, shall furnish to the Owner a construction schedule setting forth the project broken down by various divisions of the work and by the calendar days, as described in the General Conditions.
3. The Owner agrees to pay to the Contractor for the faithful performance of this agreement, subject to additions and deductions as provided in the specifications or proposal, in lawful money in the amount of \$ _____.

4. Alternates. Alternates, if any, included in the Contract Sum are as follows:

Item	Price
Alt. #1	
a. _____	\$ _____
b. _____	
Alt. #2	
a. _____	\$ _____
b. _____	

5. Allowances. Allowances, if any, included in the Contract Sum are as follows:

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

6. Unit Prices. Unit prices, if any, are as follows:

Item	Units and limitations	Price per Unit
------	-----------------------	----------------

7. Liquidated Damages. Liquidated damages will be \$1,000.00 per day, after the date specified for substantial completion.

8. Binding Dispute Resolution. For any claim subject to, but not resolved by mediation, the method of binding dispute resolution shall be litigation in a court of competent jurisdiction.

9. The Owner's Representative is:

Lisa Minter, County Manager
408 Summit Drive
Sanford, NC 27330
lminter@leecountync.gov

The Contractor's Representative is:

10. It is further mutually agreed between the Parties that if at any time after the execution of this agreement and the surety bonds hereto attached for its faithful performance, the Owner shall deem the surety or sureties upon such bonds to be unsatisfactory, or if, for any reason, such bonds cease to be adequate to cover the performance of the Work, the Contractor, at its own expense, within five (5) days after the receipt of notice from the Owner so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the Owner. In such event, no further payment to the Contractor shall be deemed to be due under this agreement, until such new or additional security for the faithful performance of the Work shall be furnished in a manner and form satisfactory to the Owner.

11. Compliance with E-Verify requirements: The Contractor and any of its subcontractors must comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes, if applicable, which requires certain employers to verify the work authorization of each newly hired employee through the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies.

12. Divestment from companies that boycott Israel: Contractor certifies that (a) it is not identified on the Israel Boycott List or any other list created by the NC State Treasurer pursuant to N.C.G.S. 147—86.80 et al and (b) it will not take any action causing it to appear on any such list during the term of the contract agreement.
13. Iran Divestment Act Certification. The Contractor certifies that the Contractor is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 147-86.58 (the Final Divestment List) and the Contractor will not utilize any subcontractors performing work under this Contract which is listed on the Final Divestment List. The Final Divestment List can be found on the State Treasurer’s website at the address and should be updated every 180 days.
14. Non-Discrimination in Employment. The Contractor will not discriminate again any employee or applicant for employment because of age, sex, race, creed, national origin or disability. In the event Contractor is determined by the final order of an appropriate agency or court to be in violation of this provision or any non-discrimination provision of federal, state or local law, this Contract may be suspended or terminated, in whole or in part by the County. In addition, the Contractor may be declared ineligible for further contracts with the County.
15. Drug-Free Workplace. During the performance of this agreement, the Contractor agrees to (i) provide a drug-free workplace for its employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees of the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in its workplace and specifying the actions that will be taken against employees for violations of such prohibitions, (iii) state in all solicitations or advertisements for employees placed by or on its behalf that it maintains a drug-free workplace; (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000.00 so that the provisions will be binding upon each subcontractor or vendor.
16. Non-Appropriation Clause. Contractor acknowledges that Lee County is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate. In the event that public funds are unavailable and not appropriated for the performance of Lee County’s obligations under this contract, then this contract shall automatically expire without penalty to Lee County thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that Lee County shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations. In the event of a change in the Lee County’s statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects Lee County’s authority to continue its obligations under this contract, then this contract shall automatically

terminate without penalty to Lee County upon written notice to Contractor of such limitation or change in Lee County's legal authority.

17. No Pledge of Taxing Authority. No deficiency judgment may be rendered against Lee County or any agency of Lee County in any action for breach of a contractual obligation under this contract. The taxing power of the Lee County is not pledged directly or indirectly to secure any monies due under this contract.
18. Gov Ops. Contractor acknowledges that by contracting with Lee County and receiving public funds, they may be subject to potential examination, evaluation and investigation, including access to buildings and documents and compelled testimony, by the Joint Legislative Commission on Governmental Operations under Section 27.10(b) of North Carolina S.L. 2023-134. Contractor acknowledges that Lee County has no control over the Commission and its activities.
19. This agreement becomes effective upon the last signature of both parties.

IN WITNESS WHEREOF, the Parties hereto have executed this agreement on this the _____ day of _____, _____.

_____ **CONTRACTOR / FIRM**

By: _____

Witness:

Title: _____

Date: _____

LEE COUNTY GOVERNMENT

By: _____

Witness:

Title: _____

Date: _____

SECTION 00 60 00

PROJECT FORMS

PART 1 GENERAL

1.01 SUMMARY

- A. The following documents are hereby incorporated into the Contract Documents by reference:
1. AIA Documents: Properly licensed forms are available for purchase from the American Institute of Architects at www.aia.org/documents. Utilize current version of each document.
 - a. G701 Change Order Form
 - b. G702 Application and Certificate for Payment
 - c. G703 Continuation Sheet
 - d. G704 Certificate of Substantial Completion
 - e. G706 Contractor's Affidavit of Payment of Debts and Claims
 - f. G706A Contractor's Affidavit of Payment of Release of Liens
 - g. G707 Consent of Surety to Final Payment
 - h. G710 Architect's Supplemental Instruction Form
 - i. G714 Construction Change Directive
- B. The following documents are included in the Project Manual:
1. Section 00 61 13.13 - Performance Bond Form
 2. Section 00 61 13.16 - Payment Bond Form
 3. Section 00 62 11 - Submittal Transmittal Form
 4. Section 00 63 13 - Request for Interpretation
 5. Section 00 63 25 - Substitution Request Form
 6. Section 00 63 55 - Change Proposal Form
 7. Section 00 65 36 - Contractor's Warranty
 8. Section 00 65 37 - Asbestos Free Warranty

END OF SECTION

SECTION 00 61 13.13

PERFORMANCE BOND FORM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Utilize Owner's required Performance Bond Form attached to this section.

1.02 RELATED DOCUMENTS

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

1.03 GENERAL

- A. A Performance Bond in the amount of the contract is required.
- B. Include the cost of providing bonds in the Base Bid.
- C. Deliver the required bonds to the Owner no later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section.
- D. Write bonds on the forms contained or referenced herein.
- E. Write bond in the amount of the Contract Sum.
- F. Date bonds on the date of the Contract.
- G. Issue bonds by sureties and execute by an attorney-in-fact, on behalf of the surety, who is authorized to do business in the State of North Carolina.
- H. Affix thereto a certified and current copy of the power of attorney.

FORM OF PERFORMANCE BOND

Date of Contract: _____

Date of Execution: _____
Name of Principal (Contractor) _____

Name of Surety: _____

Name of Contracting Body: _____

Amount of Bond: _____

Project

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind, ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body, identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the contracting body, with or without notice to the surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

Contractor: (Trade or Corporate Name)

By: _____

(Proprietorship or Partnership)

Attest: (Corporation)

Title: _____
(Owner, Partner, or Corp. Pres. or Vice
Pres. only)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

(Corporate Seal)

(Surety Company)

Witness:

By: _____
Title: _____
(Attorney in Fact)

Countersigned:

(Surety Corporate Seal)

(N.C. Licensed Resident Agent)

Name and Address-Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

SECTION 00 61 13.16

PAYMENT BOND FORM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Utilize Owner's required Payment Bond Form attached to this section.

1.02 RELATED DOCUMENTS

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

1.03 GENERAL

- A. A Labor and Material Payment Bond in the amount of the contract is required.
- B. Include the cost of providing bonds in the Base Bid.
- C. Deliver the required bonds to the Owner no later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section.
- D. Write bonds on the forms contained or referenced herein.
- E. Write bond in the amount of the Contract Sum.
- F. Date bonds on the date of the Contract.
- G. Issue bonds by sureties and execute by an attorney-in-fact, on behalf of the surety, who is authorized to do business in the State of North Carolina.
- H. Affix thereto a certified and current copy of the power of attorney.

FORM OF PAYMENT BOND

Date of Contract: _____
Date of Execution: _____
Name of Principal
(Contractor) _____
Name of Surety: _____
Name of Contracting
Body: _____
Amount of Bond: _____
Project _____

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall promptly make payment to all persons supplying labor/material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec.. only)

(Corporate Seal)

Witness:

Countersigned:

(N.C. Licensed Resident Agent)

Name and Address-Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

Contractor: (Trade or Corporate Name)

By: _____

Title _____
(Owner, Partner, or Corp. Pres. or Vice
Pres. only)

(Surety Company)

By: _____

Title: _____
(Attorney in Fact)

(Surety Corporate Seal)

Sheet for Attaching Power of Attorney

Sheet for Attaching Insurance Certificates

SECTION 00 62 11

SUBMITTAL TRANSMITTAL FORM

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Utilize the following Submittal Transmittal Form for this project.

1.02 RELATED DOCUMENTS

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

SECTION 00 63 13

REQUEST FOR INTERPRETATION

PART 1 GENERAL

1.01 request for interpretation

- A. RFI No.: _____
- B. Project: Lee County Buggy Building Waterproofing Restoration
- C. REI Project No. R24RAL-057
- D. Request Date: _____
- E. From: _____ (Company Name)

1.02 REFERENCE

- A. Specification Section: _____ Paragraph: _____
- B. Drawing Sheet: _____ Detail No(s): _____

1.03 DESCRIPTION of request

- A. _____

- B. Signed by: _____
- C. Signature: _____

1.04 REI RESPONSE

- A. _____

- B. Attachments: _____

- C. Response Date: _____
- D. Signed by: Stephen Ingram, PE
- E. Signature: _____

SECTION 00 63 25

SUBSTITUTION REQUEST FORM

PART 1 GENERAL

1.01 SUBSTITUTION REQUEST INFORMATION

- A. Project: Lee County Buggy Building Waterproofing Restoration
- B. REI Project No. R24RAL-057
- C. Request Date: _____

1.02 REFERENCE

- A. Specification Section: _____ Paragraph(s): _____

1.03 DESCRIPTION

- A. Manufacturer Name: _____
- B. Product Name: _____
- C. General Description of Substitution Request: _____

1.04 CERTIFICATION

- A. The undersigned certifies:
 - 1. Proposed substitution has been investigated and determined that it meets or exceeds the quality level of the specified product.
 - 2. Same warranty will be furnished for proposed substitution as for specified product.
 - 3. Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
 - 4. Proposed substitution does not affect dimensions and functional clearances.
 - 5. Payment will be made for changes to building design, including engineering design, detailing, and construction costs caused by the substitution.
 - 6. Contractor waives right to additional payment or time, that may subsequently become necessary because of the failure of the substitution to perform adequately.
- B. Submitted by (Print Name): _____
- C. Contractor Company Name: _____
- D. Signature: _____

1.05 ATTACHED SUPPORTING DATA

- A. The following items are attached to this substitution request:
 - 1. Product Data
 - 2. Test Reports
 - 3. Applicable Drawings
 - 4. (_____)
 - 5. (_____)

1.06 ENGINEERS ACTION

- A. This substitution request is:
 - 1. Approved
 - 2. Approved as noted
 - 3. Rejected - utilize specified materials
 - 4. Rejected due too late submittal - utilized specified materials
- B. Signed by: Stephen Ingram, PE
- C. Signature: _____

END OF SECTION

SECTION 00 63 55

CHANGE PROPOSAL FORM

PART 1 GENERAL

1.01 CHANGE PROPOSAL FOR:

- A. Change Proposal No. _____
- B. Project: Lee County Buggy Building Waterproofing Restoration
- C. REI Project No. R24RAL-057
- D. From (Contractor): _____
- E. Description of Change: _____

1.02 CHANGE BREAKDOWN

- A. Materials:
 - 1. Total direct cost of materials: \$ _____
 - 2. Overhead & profit on A1 (15% max.): \$ _____
 - 3. Sales tax: \$ _____
 - 4. Shipping & transportation: \$ _____
 - 5. Total Materials (A1+A2+A3+A4): \$ _____
- B. Labor:
 - 1. Total manhours: _____ mh at \$ _____ /hr. = \$ _____
 - 2. Overhead & profit on B1 (15% max.): \$ _____
 - 3. Total Labor (B1+B2): \$ _____
- C. Equipment Rental:
 - 1. Equipment Rental
 - 2. Overhead & profit on C1 (6% max.): \$ _____
 - 3. Total Equipment Rental (C1+C2): \$ _____
- D. Subcontractors:
 - 1. Subcontractors: \$ _____
 - 2. Overhead & profit on D1 (6% max.): \$ _____
 - 3. Total Subcontractors (D1+D2): \$ _____
- E. Subtotal of Proposal (A5+B4+C3+D3): \$ _____
- F. Bonds (% of Subtotal (E)): \$ _____
- G. Total of Change Proposal (E+F): \$ _____
- H. Time Extension Request: _____ calendar days

I. The Contractor agrees to perform the work outlined in this change proposal for the amount specified above in accordance with the Contract Documents if the work is authorized by the Owner.

1. Contractor Signature and Date: _____
2. Engineer Recommended Approval and Date: _____
3. Owner Approval and Date: _____

END OF SECTION

SECTION 00 65 36

CONTRACTOR'S WARRANTY

PART 1 GENERAL

1.01 WARRANTY

- A. Know all men by these presents, that we, _____
(Contractor), having installed building enclosure systems, flashings and sheet metal on the Lee County Buggy Building Waterproofing Restoration under contract between Lee County and Contractor, warrant to the Owner with respect to said work that for the period of 2 years from date of substantial completion of _____, 20____, the work shall be watertight and free from defects, provided however the following are excluded from this Warranty: 1) defects or failures resulting from abuse by the Owner, 2) damages caused by fire, tornado, hail, hurricane, acts of God, wars, vandalism, riots or civil commotion, and 3) defects in design involving failure of structural frame, load bearing walls, and/or foundations. We agree that should any leaks occur in the work we will perform emergency repairs within 24 hours' notice and perform permanent repairs promptly in a manner to restore the work to a watertight condition by methods compatible to the system, acceptable under industry standards and general practice, and acceptable to the Manufacturer, all at no expense to the Owner. We further agree that for the period specified below, we will make repairs at no expense to the Owner to defects which may develop in the work in a manner compatible to the system, acceptable under industry standards and general practice as established by the Engineer and acceptable to the Manufacturer.
- B. We agree to attend one post construction field inspection no earlier than one month prior to the Contractor's Warranty expiration date and to complete corrective actions requested by Owner, Engineer, or Manufacturer at no additional cost to the Owner.

1.02 EXECUTED BY

- A. Contractor: _____
- B. Authorized Officer Name and Title: _____
- C. Signature: _____ Date: _____

1.03 NOTARIZED BY:

A. I, _____ (print name), a Notary Public for _____ County of _____ (State), do hereby certify that _____ (officer listed above) personally appeared before me this day and acknowledged the due execution of the foregoing instrument. Witness my hand and official seal, this ____ day of _____, 20 ____ . My commission expires ____ of _____, 20 ____ .

B. Signed: _____

(OFFICIAL SEAL)

END OF SECTION

SECTION 00 65 37

ASBESTOS FREE WARRANTY

PART 1 GENERAL

1.01 FOR

- A. Owner: Lee County Government of North Carolina
- B. Project: Lee County Buggy Building Waterproofing Restoration
- C. Project Address: 115 Chatham Street, Sanford, North Carolina 27330

1.02 WARRANTY

- A. Date of Substantial Completion: _____
- B. Know all men by these presents, that we, _____
(Contractor) having furnished labor, materials, equipment and/or supplies, removed existing roof system; installed new roof system and/or miscellaneous components; from, to and/or on the above referenced project under contract between the Owner and Contractor, warrant to Owner with respect to said work that no materials containing asbestos fibers were incorporated into the work, and that, to our knowledge and belief, no materials containing asbestos remain in or are covered by the work.
- C. Exceptions: _____ If there are no exceptions, state "None".

1.03 EXECUTED BY

- A. Contractor: _____
- B. Authorized Signing Officer Name: _____
- C. Authorized Signing Office Title: _____
- D. Signature: _____ Date: _____

1.04 NOTARIZED BY:

A. I, _____ (print name), a Notary Public for _____ County of _____ (State), do hereby certify that _____ (officer listed above) personally appeared before me this day and acknowledged the due execution of the foregoing instrument. Witness my hand and official seal, this _____ day of _____, 20 _____. My commission expires _____ of _____, 20 _____.

B. Signed: _____

(OFFICIAL SEAL)

END OF SECTION

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

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ARTICLE 1. DEFINITIONS

- 1.1 Agreement- the Contract Agreement, these general conditions, and any supplementary conditions, advertisement, instructions to bidders, specifications, drawings, bonds, addendums, drawings.
- 1.2 Beneficial Occupancy- the point at which the Project can be occupied by the Owner for its intended purpose, upon achievement of Substantial Completion, as defined in 1.35.
- 1.3 Change Order- a written order to the Contractor signed by the Owner and the Designer authorizing an addition, deletion, or revision in the Work and/or an adjustment in the Contract Price and/or the Contract Time issued after execution of the Contract Agreement.
- 1.4 Completion Date- those dates identified as completion dates in the Contract Construction Schedule or elsewhere in the Contract Documents.
- 1.5 Contract Agreement- the document executed by the Contractor and Owner to formally memorialize their consent to the terms of the Agreement.
- 1.6 Construction Change Directive- a written order to the Contractor signed by the Owner and the Designer directing an addition, deletion, or revision in the Work after execution of the Contract Agreement, in circumstances when the parties have been unable to agree on an adjustment to the Contract Price or the Contract Time, but the Owner requests that the Contractor proceed with said Work subject to adjustment of the Contract Price and/or Contract Time under the procedures described herein.
- 1.7 Construction Manager- the person or firm designated as the Construction Manger in the Contract Documents, or their authorized representatives. The Construction Manager, as referred to herein, will be referred to hereinafter as if each were of the singular number, masculine gender.
- 1.8 Contract Construction Schedule- that schedule identified as the Contract Construction Schedule.
- 1.9 Contract Documents- all of the documents that make up the Agreement, plus the Drawings and Specifications that describe the scope of the work, plus allowable modifications to the contract documents.

Initial Here: ____

- 1.10 Contract Price- the total monies payable to the Contractor under the Contract Documents.
- 1.11 Contract Time- the number of calendar days stated in, or computed from, the Contract Documents for the completion of the Work, or any portion thereof. Time of completion is of the essence. The time used and referred to on the Project will be that time which is observed in Sanford, Lee County, North Carolina, being Eastern Daylight Savings Time, Eastern Standard Time, or other as designated by the Designer.
- 1.12 Contractor- the Contractor shall be that party identified in the Agreement.
- 1.13 Days- unless otherwise indicated, the term “days” shall mean consecutive calendar days.
- 1.14 Daylight Hours- the hours or portion of hours between sunrise and sunset local time.
- 1.15 Designer- the person or firm designated as the Designer, in the Contract Documents, or their authorized representatives. The Designer(s), as referred to herein, shall mean architect, landscape architect, and/or engineer. They will be referred to hereinafter as if each were of the singular number, masculine gender.
- 1.16 Drawings- the drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location, and dimensions of the Work, and generally including plans, elevations, sections, details, schedules and diagrams. A list of the Drawings is contained in the Supplemental General Conditions.
- 1.17 Field Order- a written order issued by the Designer which clarifies or interprets the Contract Documents or orders minor changes in the Work in accordance with the Contract Documents.
- 1.18 Final Completion- the point at which the Contractor has, as determined by the Designer, completed the Work, with the exception of guaranty and warranty obligations, and becomes entitled, upon the recommendation of the Designer and determination by the Owner, to final payment.
- 1.19 Liquidated Damages- An amount, as stated in the Contract Agreement, reasonably estimated in advance to cover the consequential damages associated with the Owner’s economic loss in not being able to use the Project for its intended purposes at the end of the contract’s completion date as amended by change order, if any, by reason of failure of the contractor(s) to complete the work within the time specified.
- 1.20 Modification- a written amendment to the Contract Documents signed by the Owner and the Contractor and identified therein as such, or a Change Order, or a Construction Change Directive, or a Field Order.
- 1.21 Notice to Proceed- see Article 11.3.

Initial Here: ____

1.22 Owner- the Owner is the person designated as such in the Agreement.

1.23 Owner's Authorized Representative- a person or persons, employed by the Owner and designated from time to time by written notice to the Contractor to administer the Contract Documents, and to observe and monitor the Work on behalf of the Owner with authority and responsibility as herein specified.

1.24 Notice- the term "notice" or "written notice" as used herein shall mean and include all written notices, demands, instructions and claims, approvals and disapprovals furnished by the Owner or the Designer to obtain compliance with the requirements of the Contract Documents as well as all written notices, demands, instructions and claims furnished by the Contractor as required by the Contract Documents. Where notice is required under the terms of the Contract Documents, written notice shall always be required, and oral or "constructive" notice shall be insufficient and ineffective as notice unless specifically allowed by the Supplementary Conditions or a Modification to the Agreement. Written notice shall be deemed to have been duly served on the date that it is delivered in person to the individual or to a member of the firm, to an officer of the corporation for whom it is intended, to an authorized representative of such individual, firm, or corporation, or on the date that it is mailed by registered or certified mail, return receipt requested, addressed to the last business address of such individual, firm, or corporation. Written notice may also be given by facsimile transmission, provided that proof of delivery is obtained. In the case of delivery in person, such delivery shall not be effective unless and until a written and signed receipt showing the date and time of deliver is obtained.

1.25 Project- the total construction of which the Work performed under the Contract Documents may be the whole or a part.

1.26 Project Expediter- As used herein, is an entity stated in the Contract Documents, designated to effectively facilitate scheduling and coordination of Work activities. For the purpose of a single prime contract, the single prime contractor is designated as the Project Expediter.

1.27 Project Manager- that person designated by the Contractor who shall be in general charge of the Work and its performance.

1.28 Request for Information- a written communication from the Contractor to the Designer for any interpretation of, or information needed, required, or desired under the Contract Documents. The Owner reserves the right to determine the reasonable format and contents required for a Request for Information. In any Request for Information, the Contractor shall state a reasonable date by which a response is necessary in order to avoid delay in progress of the Work and shall make such request sufficiently in advance of such date as to avoid any such delay.

1.29 Request for Payment- document approved by Owner, which is to be used by the Contractor in requesting progress payments and which is to include a Schedule of Values as required by the Contract Documents and an affidavit of the Contractor that progress

Initial Here: ____

payments theretofore received from the Owner on account of the Work have been applied by the Contractor to discharge in full all the Contractor's obligations incurred in connection with Work covered by all prior applications for payment.

- 1.30 Superintendent- that person designated by the Contractor who has day-to-day responsibility for the prosecution of the Work and the obtaining of proper materials and equipment, and adequate labor.
- 1.31 Schedule of Values- any breakdown of the Contract Price which may be required by the Contract Documents and designated as such.
- 1.32 Specifications- the portion of the Contract Documents consisting generally of the written requirements for materials, equipment, construction systems, standards, and workmanship for the Work and performance of related services.
- 1.33 Subcontractor- a person, firm, or corporation who has entered into a direct contract with the Contractor to perform any of the Work of the Project.
- 1.34 Submittal- shop drawings, product data, samples, and other documents required by the Contract Documents to be submitted by the Contractor to the Designer.
- 1.35 Substantial Completion- the point at which the Work, and Work by other Contractors on or in connection with the Project, as determined by the Designer, is sufficiently complete in accordance with the Contract Documents that it can be beneficially occupied by the Owner, and the Work can be utilized by the Owner for its intended use, and all necessary permits and permissions for Beneficial Occupancy and utilization having been obtained by the Contractor. All operations and maintenance manuals, Owner training, and as-built drawings must be submitted prior to Substantial Completion being achieved.
- 1.36 Work- the construction and services required by the Contract Documents, including all labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations.

ARTICLE 2. CORRELATION, INTERPRETATION AND INTENT OF CONTRACT DOCUMENTS

- 2.1 It is the intent of the Specifications and Drawings and other Contract Documents to describe a complete Project in accordance with the Contract Documents.
- 2.2 The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If the Contractor finds a conflict, error or discrepancy in the Contract Documents, the Contractor shall notify the Designer in writing before proceeding with the Work affected thereby. In resolving such conflicts, errors and discrepancies, the Contract Documents shall be given preference in the following order: Contract Agreement, Modifications, Addenda, Supplemental Conditions, General Conditions, Specifications, and Drawings. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over

general Drawings. Any Work that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described in words which, so applied, have a well known technical trade meaning shall be deemed to refer to such meaning and to incorporate any recognized standards which are a part of such meaning.

2.3 Miscellaneous items, accessories and work which are not specifically mentioned, but which are essential to produce a complete and properly operating installation, or useable structure or plant providing the indicated function shall be furnished and installed without change in the Contract Price. Such miscellaneous items and accessories shall be of the same quality standards, including material, style, finish, strength, class, weight and other applicable characteristics, as specified for the major component of which the miscellaneous item or accessory is an essential part, and shall be approved by the Designer before installation. This requirement is not intended to include major components not covered by or inferable from the Contract Documents.

2.4 The Work of all trades under the Contract Documents shall be coordinated by the Contractor in such a manner as to obtain the best workmanship possible for the entire Project and all components of the Work shall be installed or erected in accordance with the best practices of the particular trade.

2.5 The Contractor shall fully complete the Work and shall be responsible for all of the Work under the Contract Documents to which the Construction Agreement applies. If the Contractor is prevented from doing so by any limitation of the Contract Documents, the Contractor shall immediately give notice thereof to the Designer and the Owner in writing before proceeding with the construction in the area where the problem or limitation exists.

2.6 Standard specifications or manufacturers' literature, when referenced, shall be of the latest revision or printing unless otherwise stated and is intended to establish the minimum requirements acceptable.

2.7 For those materials specified without the use of brand names, the Contractor shall submit within thirty (30) days after his receiving the Contract Agreement for signatures, any product that meets the express requirements of the Specifications.

Such Submittal shall include manufacturer's data, test reports, performance data and certifications, samples, erection details, and other applicable information as required to permit determination by the Designer whether such proposed products are suitable. The Designer shall be the sole judge as to the suitability of any proposed product. The burden of proof of quality rests with the Contractor.

2.8 The Contractor is required to examine and read the complete set of Contract Documents for information concerning the Work, because some of the Work for which the Contractor will be responsible may be indicated on or in documentation applying primarily to the Work of one or more other separate prime contractors. No allowance will be made for the Contractor's failure to become familiar with the complete set of project documents.

Initial Here: ____

2.9 Contractor's requests for clarification or information shall clearly define the cause(s) of Contractor's request and, as appropriate, shall include Contractor's interpretation and Contractor's proposed solution.

ARTICLE 3. FAMILIARITY WITH WORK, CONDITIONS AND LAWS

3.1 The Contractor has investigated prior to bidding and is satisfied with all conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electrical power, roads and uncertainties of weather, or similar physical conditions at the Project site, and the character of equipment and facilities needed prior to and during prosecution of the Work. The Contractor is satisfied as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from inspection of the Project site, including all exploratory work done by the Owner, as well as from information presented by the Contract Documents, or any other information made available to the Contractor prior to receipt of bids. Any failure by the Contractor to become acquainted with the available information shall not relieve the Contractor from the responsibility for estimating properly the difficulty or cost of successfully performing the Work.

3.2 The Contractor shall be entitled to rely upon all information furnished to the Contractor in writing by the Owner with respect to the Project site and to make all inferences from it that would reasonably be made by a contractor having knowledge and experience with similar work; however, the Contractor shall not be entitled to infer from Owner-supplied information any fact or condition which would not be inferred by a contractor having knowledge and experience with similar work and, if the Owner-supplied information is inadequate or insufficient in any respect, the Contractor shall be required to obtain independently such other information as a knowledgeable and experienced contractor would prudently obtain in order to evaluate any such condition.

3.3 The Contractor specifically acknowledges familiarity with all Federal, State, and local laws, ordinances, rules and regulations which may in any manner affect those engaged or employed in the Work, or the materials or equipment in or about the Work, or in any way affect the conduct of the Work and agrees that the Contractor and the Contractor's employees, subcontractors, and suppliers will, at all times, comply with same. If the Contractor shall discover any provisions in the Contract Documents which are contrary to or inconsistent with any such law, ordinance, rule, or regulation, the Contractor shall immediately give notice thereof to the Designer and the Owner in writing, identifying any items of Work affected, and the Contractor shall not proceed until the Contractor has received written direction from the Designer with respect to these items. If the Contractor performs contrary to or inconsistently with any such law, ordinance, rule, or regulation without giving such notice, the Contractor shall bear all costs which are a consequence of such performance.

3.4 At times selected by the Designer after execution by the Contractor of the Construction Agreement, a pre-construction conference shall be scheduled and conducted for the benefit of the Project.

ARTICLE 4. BONDS

4.1 A performance bond in the full amount of the Contract Price shall be required of the Contractor to guarantee the faithful performance of the Work in compliance with the Contract Documents, in such form as may be required by law and approved by the Owner. The bond shall be dated the same date as the Construction Agreement and must be accompanied by a current copy of the power of attorney for the attorney-in-fact executing such bond on behalf of a surety company licensed to do business in the state of North Carolina.

4.2 A payment bond in the full amount of the Contract Price shall be required of the Contractor to guarantee the payment of all labor and material costs or claims in connection with compliance with the Contract. The payment bond shall be in such form as may be required by law and approved by the Owner. Said bond shall be dated and executed in the same manner as the performance bond in paragraph 4.1.

ARTICLE 5. INSURANCE AND INDEMNITY

5.1 CONTRACTOR PROVIDED INSURANCE

The Contractor shall, without limiting its obligations or liabilities, procure, pay for and maintain such insurance as is required by law and as is required by this Agreement to protect the Contractor and the Owner from claims for damages for bodily injury, including death, and from claims for property damage which may arise from the Contractor's or its representatives', consultants', Subcontractors', agents', or employees' operations under this Agreement. Such insurance shall be of the kinds and have limits of liability and coverages not less than the minimum limits hereinafter specified or required by law, whichever is greater. The Owner makes no representation as to the adequacy or sufficiency of such coverages. The following requirements shall in no way be construed to limit or eliminate the liability of the Contractor, which arises from performance of Work under the Agreement. The Contractor is strictly responsible for any losses, claims, and costs of any kind which exceed the Contractor's limits of liability, or which may be outside the coverage scope of the policies.

The insurance specified shall be provided by an insurer approved by the Owner authorized to do such business in the State of North Carolina, and on terms approved by the Owner. Insurance companies utilized shall have a minimum rating of A- and Class VII as evaluated by the most current A.M. Best Rating Guide. If the insurer has a Best Rating less than A-and Class VII, the Contractor must receive specific written approval from the Owner prior to proceeding with any Work under the Agreement. All agents and brokers shall hold valid licenses from the State of North Carolina. Before commencing mobilization to the Project site and not later than 7 days after the receipt of the Construction Agreement by the Contractor for signatures, the Contractor shall furnish to the Owner a certificate or certificates of insurance in a form satisfactory to the Owner. Upon request of the Owner, the Contractor shall provide the Owner with certified copies of the insurance policies required by this Article, including without limitation declaration pages, conditions, exclusions and endorsements, and confirmation that each policy premium has been paid for the required term of this Agreement. A copy of the umbrella policy shall be provided to the Lee County Finance Department. Certificates shall be signed by a person authorized by that insurer to bind coverage on its behalf. In the event of any such cancellation, non-renewal, reduction, restriction, or change in any insurance, the Contractor is obligated to replace such

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insurance within 7 days without a gap in coverage and file accordingly such notice with the Owner, and other interested parties. Failing immediate receipt of evidence of such replacement of insurance the Owner reserves the right to procure such insurance as the Owner considers desirable and the Contractor shall pay or reimburse the cost of the premium in respect thereof. It is expressly provided, however, that any action or inaction on the part of the Owner in this respect shall in no way change or reduce the Contractor's responsibilities and liabilities under this Agreement. Self-funded, policy fronting, or other non-risk transfer insurance mechanisms are not acceptable without prior written approval of the Owner. Full disclosure of such a program must be made prior to commencing mobilization to the Project site. Failure to make a full disclosure constitutes a material breach of the Agreement, justifying termination for default.

The Contractor shall name the Owner and Designer as additional insureds under all its insurance contracts (except workers' compensation) with respect to and including without limitation liability arising out of activities performed by or on behalf of the Contractor, products and completed operations of the Contractor, and automobiles owned, hired, leased, or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to additional insureds.

For any claims related to this Project, the Contractor's insurance or self-insurance shall be primary and noncontributory with respect to the Owner's insurance. Any insurance or self-insurance maintained by the Owner shall be excess and noncontributory with respect to the Contractor's insurance.

All policies of insurance shall contain a clause waiving rights of subrogation against the Owner, unless the Owner approves otherwise in writing.

Limits of coverage are not to be amended by deductible clauses of any nature without the express written consent of the Owner. The Contractor shall be solely responsible for any deductible assumptions that may exist in any insurance policies required under this Agreement. In addition, the Contractor shall be responsible and shall not be reimbursed for any losses arising from any risk or exposure not insured as required herein, or not covered as a result of a normal policy extension or that falls within the self insured retention, if Contractor is self insured.

The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

The claim provisions in the Contractor's insurance policies must specifically state the insurance company or Contractor's Third Party Administrator, if self insured, has both the right and duty to adjust a claim and provide defense.

The policies shall not contain any provision or definition which would serve to exclude or eliminate from coverage third party claims, including exclusions of claims for bodily or other injury to shareholders, partners, officers, directors, or employees of the insured, the premises owner, real estate manager, or the insured's Subcontractor, or any family relative of such persons.

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If the policies contain any warranty stating that coverage is null and void (or words to that effect) if the Contractor does not comply with the most stringent regulations governing the Work, it shall be modified so that coverage shall be afforded in all cases except for the Contractor's willful or intentional noncompliance with applicable government regulations.

Any failure by any person to comply with reporting or other provisions of the policy including breach of warranties, shall not affect coverage provided to the Owner and its representatives, officials, and employees.

The insolvency or bankruptcy of the Insured or of the Insured's estate shall not relieve the insurance companies of their obligations under these policies. Any clauses to the contrary are unacceptable and must be stricken.

Failure to comply with these requirements shall be a material breach of this Agreement justifying termination for default.

5.2 CONTRACTOR PROVIDED WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

The Contractor and its Subcontractors shall procure and maintain Workers' Compensation Insurance in the amount and type required by the State of North Carolina and federal law for all employees employed under the Agreement who may come within the protection of Workers' Compensation Laws and covering all operations under the Agreement whether performed by the Contractor or by his Subcontractors. In jurisdictions not providing complete Workers' Compensation protection, the Contractor and his Subcontractors shall maintain employers' liability insurance in an amount, form, company, and agency satisfactory to the State of North Carolina and the Owner for the benefit of all employees not protected by Workers' Compensation Laws and covering all operations under the Agreement whether performed by the Contractor or by his Subcontractors.

The Contractor shall pay such assessments as will protect the Contractor and the Owner from claims under the Workers' Compensation laws, workers' or workmen's' compensation disability benefits, and other similar employee benefit acts. The current Experience Modification Factor shall be indicated on the Certificate of Insurance.

Coverage under this section shall be as required by federal and state Workers' Compensation and Occupational Disease Statutes, and shall have minimum limits as follows:

Coverage A:	Statutory, State of North Carolina	
Employers' Liability:	Each Accident	\$1,000,000
	Disease - Policy Limit	\$1,000,000
	Disease - Each Employee	\$1,000,000

Such insurance shall include Voluntary Compensation coverage, a Waiver of Subrogation in favor of the Owner as well as other endorsements that may be required by applicable jurisdictions, i.e. United States Longshoremen and Harbor Workers Act and maritime coverage (Jones Act).

5.3 CONTRACTOR PROVIDED AUTOMOBILE LIABILITY INSURANCE

The Contractor shall procure and maintain automobile insurance against liability for bodily injury and property damage as described below, that may arise with respect to the Work being performed under the Agreement, and as will provide protection from claims which may arise out of or result from the Contractor's performance of the Work and the Contractor's other obligations under the Agreement, whether such performance of the Work is by the Contractor, by any representative or Subcontractor, by anyone, both officially and personally, directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

This policy of insurance shall carry the following minimum Limit of Liability:

Combined Single Limit \$1,000,000

The policy of insurance shall contain or be endorsed to include the following:

- a) owned, hired, and non-owned automobile liability.
- b) If the policy contains a warranty stating that coverage is null and void (or words to that effect) if the transporter does not comply with the most stringent regulations governing the Work, it shall be modified so that coverage shall be afforded in all cases except for the transporter's willful or intentional noncompliance with applicable government regulations.

Any failure by any party to comply with reporting or other provisions of the policy including breach of warranties, shall not affect coverage provided to the Owner and its representatives, officials, and employees.

No subcontracting of waste hauling shall be permitted without prior, written approval of the Owner.

5.4 CONTRACTOR PROVIDED GENERAL LIABILITY

This policy must be written on an Occurrence basis, with the following minimum Limits of Liability:

General Aggregate per project	\$2,000,000.00
Products/Completed Operations Aggregate	\$2,000,000.00
Bodily Injury and Property Damage csl/each occurrence	\$1,000,000.00
Personal Injury and Advertising Injury	\$2,000,000.00

The policy of insurance shall contain or be endorsed to include the following:

- a) Blanket Contractual Liability covering Contractor's indemnification obligations under this Agreement, in accordance with ISO policy form CG 00 01. Modifications to the standard provision will not be acceptable if they serve to reduce coverage.

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- b) Premises/Operations Liability.
- c) Explosion, collapse, and underground fault.
- d) Independent Contractors and Independent Subcontractors coverage.
- e) Broad Form Property Damage.
- f) Personal Injury
- g) Cross Liability/Severability of Interest clause.
- h) Employer's Stop-Gap Liability endorsement, if applicable.
- i) Amendment of the Pollution Exclusion Endorsement to allow coverage for bodily injury or property damage caused by heat, smoke, or fumes from a hostile fire.
- j) Designated General Aggregate Limit Endorsement if required by the Supplemental General Conditions.

5.5 CONTRACTOR PROVIDED PROPERTY INSURANCE

The Contractor shall purchase All Risk Property Insurance on a Completed Value Form in the names of the Owner, Contractor, Subcontractors, and sub-subcontractors as their interests may appear with limits as follows:

- a) Full insurance value of the Work, or
- b) Amount equal to the Contract Price for the Work, whichever is higher.

The Contractor is responsible for all physical damage to owned or rented machinery, tools, equipment, forms, and other items owned, rented or used by the Contractor and/or Subcontractor(s) in the performance of the Work. The insurance coverage evidencing such shall include a waiver of subrogation in favor of the Owner.

5.6 CLAIMS

The Contractor shall notify the Owner within 24 hours of any claims or alleged claims received by the Contractor covered by any of the policies of insurance required in this Agreement. The Contractor shall provide a written copy of the claim or alleged claim to the Owner within 3 days of the Contractor's receipt of the claim or alleged claim. If a claim is settled to the satisfaction of the claimant, the Contractor shall submit a copy of the claimant's release to the Owner.

If a claim or alleged claim is rejected by the Contractor and/or its insurance company, the Contractor shall immediately report this fact to the Owner.

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Should 30 days elapse after the claim or alleged claim has been received by the Contractor, and the Contractor is not able to report a settlement or rejection of the claim, it shall report to the Owner the steps being taken with respect to the claim.

Without limiting the foregoing, the Contractor shall notify in writing the County risk manager of any paid or incurred claims which may impair annual aggregate or general liability.

5.7 CONTRACTOR'S DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and approved by the Owner. At the option of the Owner, either: the insurer shall reduce to a maximum of \$250,000 or eliminate such deductibles or self-insured retentions with respect to the Owner, or the Contractor shall provide evidence of collateral provided to insurers or procure a bond guaranteeing payment of losses and related investigations, claim administration, and defense expenses within the deductible or self-insured retention amount. Any self-insured retention or deductible amount on the policy shall not reduce the amount of collectible limits or liability.

5.8 CONTRACTOR'S SUBCONTRACTORS

The Contractor shall include all Subcontractors as Insureds under its policies, or shall furnish separate certificates, policies, and endorsements for each Subcontractor the Contractor intends to use. If a Subcontractor does not take out insurance in his own name and the Contractor wishes to provide insurance protection for such Subcontractor and such Subcontractor's employees, the Contractor shall either (a) procure appropriate policies in the name of the Subcontractor, or (b) cause a rider or riders to be attached to the Contractor's policies which shall identify the Subcontractor thereby covered; provided, however, in the case of the latter option, such a rider need not be attached to the Contractor's workers' compensation policy if such policy by its terms is sufficiently broad to cover the employees of all Subcontractors performing Work under the Contract Documents. Except as otherwise approved by the Owner in writing, Limits of Liability and coverage scope must be at a minimum as stringent as required of the Contractor by the Contract Documents. All Work performed for the Contractor by any Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance as provided herein. Insurance monies received from any loss shall be divided as the respective interest of the parties affected shall appear.

5.9 INDEMNIFICATION

To the fullest extent provided by law, the Contractor shall indemnify and hold harmless the owner, the designer and the agents, consultants and employees of the owner and designer, from and against all claims, damages, losses and expense, including, but not limited to, attorneys' fees, arising out of or resulting from the performance or failure of performance of the work, provided that any such claim, damage, loss or expense 1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and 2) is caused in whole or in part by any

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negligent act or omission of the Contractor, the Contractor's subcontractor, or the agents of either the Contractor or the Contractor's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this article.

The provisions of this paragraph shall survive the termination or cancellation or completion of this Agreement.

ARTICLE 6. OTHER DOCUMENTS AND SUBMITTALS

The Contractor acknowledges that the processing of shop drawings and other submittals is directly impacted by the clarity, completeness, and accuracy of said documents and that it is the Contractor's responsibility to (i) review and coordinate each submittal with all other related or affected Work and (ii) approve each submittal before submitting same to the Designer for approval.

No substitutions and no deviations from any requirement of the Contract Documents shall be deemed allowed unless the Contractor has specifically informed the Designer and the Owner in writing of such deviations at the time of submittal and the Designer and the Owner have given written and specific approval to the substitutions or deviations. In proposing a deviation or substitution the Contractor warrants to the Owner, notwithstanding any review, allowance or approval by the Designer or the Owner that the deviation or substitution is at least equal to or better in quality and for the purpose intended, and that Contractor shall not by reason of any such review, allowance or approval be relieved from any obligation or responsibility contained in the Contract Documents.

ARTICLE 7. CONTRACTOR

7.1 The Contractor shall supervise and direct the Work efficiently and with the Contractor's best skill and attention. Except as may be set forth specifically in the Contract Documents, the Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs in connection with the Work. The Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

7.2 The Contractor shall appoint a Project Manager and shall keep on the Project at all times during its progress a competent Resident Superintendent and necessary assistants who shall not be replaced without prior written approval by the Owner except under extraordinary circumstances, in which event immediate written notice shall be given to the Designer and the Owner. The Project Manager and the Resident Superintendent may be the same person or different persons. At any time, the Owner, in its sole and absolute discretion, may require the Contractor to replace the Project Manager or Resident Superintendent with an experienced and competent person or persons upon seven (7) days written notice from the Owner to the Contractor. Such replacement shall be at the Contractor's expense and at no cost to the Owner.

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Both the Project Manager and the Resident Superintendent shall have authority to act on behalf of the Contractor, and instructions, directions or notices given to either of them shall be as binding as if given to the Contractor.

7.3 The Contractor shall provide sufficient competent and suitably qualified personnel, equipment, and supplies to lay out the Work and perform construction as required by the Contract Documents. The Contractor will at all times maintain good discipline and order at the site, and will comply with all applicable OSHA standards.

Any person employed by the Contractor, any Subcontractor, or any sub-subcontractor who, in the opinion of the Designer or the Owner, does not perform his Work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Owner or Designer, be removed forthwith by the Contractor, Subcontractor, or sub-subcontractor employing such person without cost to the Owner, and shall not be employed again in any portion of the Work without the written approval of the Owner or Designer.

Should the Contractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the Work within three (3) days after written order, the Owner may withhold further payment by written notice until compliance with such order.

7.4 If, in the opinion of the Designer or the Owner, any Subcontractor on the Project is incompetent or otherwise unsatisfactory, he shall be replaced by the Contractor with no increase in the Contract Price if and when directed by the Designer or the Owner in writing.

7.5 The Contractor shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools appliances, fuel, light, heat, and all other facilities and incidentals necessary for the execution, maintenance, initial operation, and completion of the Work, other than those specifically excluded by the Contract Documents and to be furnished by the Owner or others. When use or storage of hazardous materials or equipment or methods of more than ordinary risk are necessary in accomplishing the Work, the Contractor shall give the Owner and Designer reasonable advance notice.

All equipment which is proposed to be used in the Work shall be of sufficient size and in such mechanical condition as to meet the requirements of the Work and produce a satisfactory quality of work. Equipment used on any portion of the Work shall be such that no injury to previously completed Work, adjacent property, or existing facilities shall result from its use.

When the methods and equipment to be used by the Contractor accomplishing the Work are not prescribed in the Contract Documents, the Contractor shall be free to use any methods or equipment that will accomplish the Work in conformity with the requirements of the Contract Documents.

When the Contract Documents specify the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Designer. If the Contractor desires to use a method or type of equipment other than specified in the Contract Documents, the Contractor may request authority from the Designer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of

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the reasons for desiring to make the change. If approval is given, it shall be on the condition that the Contractor shall be fully responsible for producing Work in conformity with the requirements of the Contract Documents. If, after trial use of the substituted methods or equipment, the Designer determines that the Work produced does not meet the requirements of the Contract Documents, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining Work with the specified methods and equipment at no additional cost to the Owner. The Contractor shall remove any deficient Work and replace it with Work of specified quality, or take such other corrective action as the Designer may direct. No change in the Contract Price or in Contract Time shall be made as a result of authorizing a change in methods or equipment under this paragraph.

7.6 All materials and equipment shall be new, except as otherwise provided in the Contract Documents. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or approved, such materials shall be delivered to the Project site in their original packages or containers with seals unbroken and labels intact.

Materials shall be so stored as to assure the preservation of their quantity, quality and fitness for the Work. Stored materials, even though approved before storage, may again be inspected by the Designer or Owner prior to their use in the Work and shall meet the requirements of the Contract Documents at the time they are incorporated into the Work. Stored materials shall be located so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Designer and the Owner. Materials to be stored at the Project or on the Owner's property shall not create an obstruction to the Owner's or other contractor's reasonable activities. Private property shall not be used for storage purposes without written permission of the owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Owner a copy of the property owner's permission. All storage sites on private or the Owner's property shall be restored to their original condition by the Contractor at his entire expense, except as otherwise agreed to (in writing) by the owner or lessee of the property.

7.7 All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processor, except as otherwise provided in the Contract Documents.

7.8 The Contractor will be fully responsible for all acts and omissions of his Subcontractors and of persons directly or indirectly employed by them and of persons for whose acts any of them may be liable to the same extent that the Contractor is responsible for the acts and omissions of the Contractor's own employees. Nothing in the Contract Documents shall create any contractual relationship between any Subcontractor or supplier and the Owner or the Designer, or any obligation on the part of the Owner or the Designer to pay or see to the payment of any money due any such Subcontractor or material furnisher except as may otherwise be required by law. The Owner or the Designer may furnish to any Subcontractor or supplier, to the extent practicable, evidence of amounts paid to the Contractor on account of specific Work done.

7.9 The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing the Work among Subcontractors.

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7.10 The Contractor agrees to bind specifically every Subcontractor to the terms and conditions of the Contract Documents for the benefit of the Owner and to furnish written evidence thereof to the Designer and the Owner.

7.11 The Contractor shall attend job progress conferences and all other meetings or conferences as directed by the Designer. The Contractor shall be represented at these job progress conferences by a representative having the authority of the Project Manager and by such other representatives as the Designer may direct. Job progress conferences shall be open to Subcontractors, suppliers and any others who may contribute beneficially toward maintaining required job progress, and such personnel shall be encouraged by the Contractor to attend. It shall be the principal purpose of job progress conferences to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the Project on schedule and to complete the Work and the Project by the specified Completion Dates. The Contractor shall be prepared to assess progress of the Work as required in the Contract Documents and to recommend remedial measures for correction of progress as may be appropriate. The Designer shall preside as chairman and arrange for minutes to be taken and circulated.

In the event that the prosecution of the Work is discontinued for any reason, the Contractor shall notify the Designer and the Owner at least forty-eight (48) hours in advance of resuming operations.

Should the terms of the Contract Documents require completion of one or more portions of the Work for the Beneficial Occupancy of the Owner prior to completion of the entire Work, the Contractor shall complete such portion(s) of the Work on or before the date specified. Such completion shall include the obtaining of all government or other permits, permission, and/or approvals necessary to occupancy. The Contractor shall independently estimate the difficulties involved in arranging the Work to permit such Beneficial Occupancy and shall not claim any additional compensation or time extension by reason of any delay or increased cost due to completing such portion(s) of the Work. The Owner's possession and use of such portion(s) of the Work shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents. The Owner shall be responsible for the security, maintenance, utilities, and insurance of all portions of the Work completed and beneficially occupied by the Owner.

7.12 The Contractor shall pay all license fees and royalties, and assume all costs incident to the use of any invention, design process, or device which is the subject of patent rights or copyrights held by others, except for inventions, design processes, or devices specified by the Designer in the Contract Documents. The Contractor shall indemnify and hold harmless the Owner, the Designer, and anyone directly employed by either of them, from and against all claims, damages, losses and expenses, including attorney's fees and costs of defense, arising out of any infringement or alleged infringement of such rights during or after completion of the Work, and shall defend all such claims in connection with any actual or alleged infringement of such rights.

7.13 The Contractor shall secure and pay for all permits, including without limitation construction permits and licenses, and will pay all governmental charges and inspection fees necessary for the prosecution of the Work.

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7.14 The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations applicable to the Work and shall protect and indemnify the Owner and the Owner's officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or by the Contractor's employees, Subcontractors, sub-subcontractors

7.15 The Contractor shall be responsible for the entire site of the Project and for its reasonable and necessary protection and security, as required by laws or ordinances governing such conditions, or by custom or sound construction practices, and shall share such responsibilities as may be agreed upon among them, or in the absence of such agreement, as may be directed by the Contract Documents, Owner, or Designer. The Contractor shall be responsible for any damage to the Owner's property, or that of others, by the Contractor or the Contractor's employees, Subcontractors, sub-subcontractors, or their employees or agents, and shall make good such damages. The Contractor shall be responsible for and pay for any such claims against the Owner.

7.16 The Contractor shall protect all landscaping designated to remain in the vicinity of the operations and barricade all walks, roads, and areas as necessary to keep the public away from the construction.

7.17 The Contractor shall provide cover and/or protect all portions of the Work and provide all materials necessary to protect the Work whether performed by the Contractor or any of the Subcontractors or sub-subcontractors. Any Work damaged through the lack of proper protection, or from any other cause, including theft of materials from the work site, shall be repaired or replaced without extra cost to the Owner or extension to the Contract Time.

The Contractor shall maintain the Work during construction and until the Work is accepted. This maintenance shall constitute continuous and effective effort prosecuted day by day, with adequate equipment and forces so that the Work is maintained in satisfactory condition at all times. All costs of maintenance shall be included in the Contract Price and the Contractor will not be paid an additional amount for such effort. Should the Owner or Designer observe that the Contractor at any time has failed to maintain the Work as provided herein, the Designer may immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. Should the Contractor fail to properly respond to the Designer's notification, the Owner may, at the Contractor's expense, take such action as it may deem appropriate to remedy the defective maintenance, including suspension of the Contractor's Work or any part thereof. Any such expense incurred by the Owner shall be deducted from monies due or to become due the Contractor.

Parking lots, streets, and walks connecting to the Project area shall be protected by the Contractor from deposits of mud, sand, stone, litter, or debris in any form.

Pedestrian traffic areas around the construction limits must be maintained in a clean and safe condition at all times with required barricades and covered walkways. When excavation or other operations outside the Project limits is required, the Contractor shall, immediately following that work, return the area to its original condition.

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All catch basins and storm drain lines in the vicinity of the Project site shall be protected at all times from entry of dirt, rubble and other debris. The residue from the cleaning of trucks, wheelbarrows, concrete buggies, etc. must be prevented from entering the drainage system, and if cleaning is done, the residue must be contained and removed from the Project site with other refuse.

7.18 No burning of refuse or debris shall be allowed inside or around the Project during the course of construction without written authority from authorities having jurisdiction and the Owner.

7.19 The Contractor shall provide for and maintain necessary safety measures and safety programs for the protection of all persons involved with the Work. Such measures and programs shall include the requirements of the most current edition of the CAGC Safety and Health Manual [or the AGC Accident Prevention Manual in Construction], or equivalent requirements, and shall fully comply with all Federal, State, and local laws, rules, regulations, and building code requirements relating to the prevention of accidents or injuries to persons on or about the location of the Work.

All trenches, excavations, or other hazards in the vicinity of the Work shall be well barricaded, and properly lighted at night. When Work requires closing of an area normally used by the Owner or the public, the Contractor shall furnish, erect, and maintain temporary barricades, and properly light the area. The Contractor shall comply with any directions and public authorities in this respect.

Any unforeseen hazards, including but not limited to environmental, biological, chemical, physical, geological, natural or man-made, that are discovered by the Contractor or any of its subcontractors, must immediately be disclosed to the Owner in writing within twenty-four hours.

7.20 The Contractor shall designate a responsible officer or employee as safety inspector, whose duties shall include accident prevention on the Project as well as implementation of the Contractor's safety measures and safety programs on the Project. The name of the safety inspector shall be made known to the Designer and the Owner at the pre-construction conference.

7.21 In emergencies affecting the safety of persons, the Work, or property at the Project site or adjacent thereto, the Contractor is obligated to act in the Contractor's discretion to prevent threatened damage, injury, or loss. As soon as practicable, the Contractor shall notify the Designer and Owner of such emergency. The Contractor shall give the Designer and the Owner prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused by such emergency. If the Contractor believes that additional work done in an emergency entitles the Contractor to an increase in the Contract Price or an extension of the Contract Time, the Contractor may make a claim therefore as provided in Articles 14 and/or 15.

7.22 The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by the Work. At least weekly and at the completion of the Work, the Contractor shall remove all waste materials and rubbish from and about the Project. At the completion of the Work, the Contractor shall remove all tools, construction equipment, machinery, and surplus materials. The Contractor shall leave the Work in condition for occupancy by the Owner such that no cleaning or other operations are required. Material cleared

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from the Project and deposited on adjacent property shall not be considered as having been disposed of satisfactorily. If the Contractor fails to keep the Project clean of waste materials or

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rubbish, fails to satisfactorily clean-up weekly or at the completion of the Work, the Owner may do so and the costs thereof may be deducted from any amounts due the Contractor.

7.23 Utilities, temporary facilities, and signs shall be provided as described in the Contract Documents. Absent a contrary direction in the Supplementary Conditions, the Contractor shall pay all bills for water, electricity, or other public utility service to the Project site.

7.24 The Contractor shall indemnify and hold the Owner, the Designer, the Designer's consultants, and their officers, agents, and employees harmless against all costs, damages, and expenses, including attorney's fees and costs of defense, arising out of claims by any separate contractor or by any Subcontractor, sub-subcontractor, or supplier engaged by or employed by the Contractor or employed by any of the Subcontractors claiming through him, including without limitation damages, losses, and expenses arising out of or relating to any inconvenience, delay, interference, or other action or non-action of the Contractor or the Contractor's Subcontractors on the Project.

Nothing contained herein or appearing anywhere in the Contract Documents shall obligate or require the Owner to exercise any right or privilege, or to take any action or to refrain from taking any action under any contract it may have with any other prime contractor or party to the Project for the benefit of the Contractor or any Subcontractor, sub-Subcontractor, or supplier claiming through the Contractor.

7.25 Prior to completion of the Work and Final Payment of the Contract Price, excepting only those portions of the Work deemed accepted in accordance with the Contract Documents, the Contractor shall have charge and care of the Work, and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the Work. The Contractor shall as required by the Owner replace, rebuild, repair, restore, and make good all injury or damage to any portion of the Work occasioned by any of the above causes before Final Completion and shall bear the expenses thereof.

7.26 In the event that the Work, or any portion thereof, is suspended at any time pursuant to an order of the Owner, the Contractor shall obey all instructions of the Owner regarding storage of materials, drainage, protection of the Work, and erection of temporary structures during the suspension period.

7.27 If there is a Project Expediter assigned to the Project, that person shall be responsible for the coordination of the Work of itself and any other separate contractors, both as to space and time. The Project Expediter shall coordinate the implementation of the Contract Construction Schedule, all construction activities and close-out of the Project, including but not limited to all testing, inspection, certifications, and approvals required by public agencies. If there is not a Project Expediter, then the Construction Manager will be responsible for these duties.

The Contractor and the Project Expediter shall each be required to notify the Designer and the Owner promptly of any event or condition which could affect the conduct or progress of the Work and shall cooperate fully with all other contractors on the Project site.

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7.28 The Owner hereby delegates to the Project Expediter all of its duties to coordinate and to expedite the Work not expressly reserved to the Owner by other provisions of the Contract Documents.

7.29 All Work performed pursuant to the Contract Documents shall conform in all respects to the North Carolina State Building Code and all other state, local, and national codes in effect at the time of and applicable to this Work.

7.30 The Contractor shall provide for and maintain necessary safety measures and safety programs for the protection of all persons at the Project site, and shall comply at all times with the requirements of the most current edition of the CAGC Safety and Health Manual [or the AGC Accident Prevention Manual in Construction], or the equivalent requirements of the Contractor's safety program, and shall fully comply with all Federal, State, and local laws, rules, regulations, and building code requirements so as to prevent accidents or injuries to persons on or about the Project site. The Contractor shall clearly mark or post signs warning of existing hazards, and shall barricade excavations, elevator shafts, stairways, and similar hazards. The Contractor shall protect against damage or injury resulting from falling materials, and shall maintain all protective devices and signs throughout the progress of the Work.

7.31 The Contractor shall adhere to the rules, regulations, and interpretations of the North Carolina Department of Labor's Occupational Safety and Health Standards for the Construction Industry (29 CFR Part 1926 as adopted in 13 NCAC 07F.0201, including 29 CFR Part 1910 General Industry Safety and Health Standards applicable to construction) and N.C. Gen. Stat. §95-126 through 155 (Occupational Safety and Health) as well as all revisions and amendments to such standards or statutes as may occur throughout the performance of the Work.

7.32 Any land disturbing activity performed by the Contractor in connection with the Project shall comply with all erosion control measures set forth in the Contract Documents and any additional measures which may be required in order to ensure that the Project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15 North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 NCAC 4A, 4B, and 4C), and as may be revised or amended in the future. Upon receipt of notice that a land-disturbing activity is in violation of said Act, the Contractor shall be responsible for ensuring that all steps or actions necessary to bring the Project in compliance with said Act are promptly taken. The Contractor shall be responsible for all penalties assessed pursuant to N.C. Gen. Stat. 113A-64 with respect to its Work, and shall indemnify and hold harmless the Owner from all costs and expenses, including attorney's fees and costs of defense arising out of or related to the enforcement of the Act against any party or person described in this Article.

7.33 Any mechanical or electrical work such as sleeves, inserts, chases, etc. located in the Work of the Contractor for general work shall be built in by that Contractor. On multiple prime projects, the mechanical and electrical contractors shall set all sleeves, inserts, and other devices built into the structure in cooperation and under the supervision of the Contractor for general work. The responsibility for exact location of such items shall be that of the mechanical, plumbing, or electrical prime contractor.

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7.34 The Contractor shall be responsible for permanently fixed service facilities and systems in use during progress of the Work and shall strictly adhere to the following procedures:

- a) Prior to acceptance of the Work by the Owner, the Contractor shall remove and replace any part of the permanent building systems damaged through use during construction.
- b) Temporary filters shall be installed in each of the heating and air conditioning units, return air grilles, and other locations to prevent intrusion of dust, dirt, and debris during construction. Temporary filters shall be removed and replaced with new filters immediately prior to Substantial Completion.
- c) Extra effort shall be maintained to keep the building clean and under no circumstances shall air systems be operated if finishing operations are creating dust in excess of what would be considered normal if the building were occupied.
- d) When the permanent lighting system is used during construction, lamps shall be replaced and shall be new on the date of Substantial Completion.

ARTICLE 8. OWNER

8.1 The Owner shall issue communications and notices to the Contractor through the Designer to the extent contemplated by the Contract Documents.

8.2 In case of termination of the employment of the Designer, the Owner shall appoint as Designer a qualified person who shall have and assume all rights and duties held by the original Designer.

8.3 The Owner shall have the right to take possession of and use any portion of the Work notwithstanding the fact that the time for completion of such portion of the Work may not have expired, but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

8.4 A waiver on the part of the Owner of any breach of any part of the Contractor shall not be held to be a waiver of any other or subsequent breach.

8.5 The Owner shall pay all permanent acreage fees, governmental impact fees, and meter deposits for permanent utilities.

ARTICLE 9. CONSTRUCTION MANAGER

9.1 The Owner may employ one or more Construction Managers for the purpose of assisting the Owner, Designer, and Contractor in developing and administering budgets and cost controls, in evaluating constructability and value engineering proposals, in establishing and maintaining a critical path method (CPM) schedule, in coordinating and/or expediting the Work with other projects being constructed by the Owner or others adjacent or near the Work, or for such other purposes as the Owner may deem appropriate. From time to time the Owner may identify such

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Construction Managers(s) to the Contractor in writing identifying any tasks assigned to such Construction Managers(s).

ARTICLE 10. DESIGNER

10.1 The Designer is charged with the responsibility of interpretation of the Contract Documents. The Designer's decisions relating to aesthetic matters shall be final.

10.2 All Work completed under the Contract Documents shall be subject to review by the Designer. No Work is to be covered without the Designer's review or prior authorization. Any Work so covered without the Designer's review or prior authorization shall be uncovered at the Contractor's expense. The Contractor shall notify the Designer in writing at least twenty-four (24) hours in advance of covering any Work.

10.3 The Designer shall not be responsible for the construction means, methods, techniques, sequences, procedures, or the safety precautions and programs incident thereto, and shall not be responsible for the Contractor's failure to perform the Work in accordance with the Contract Documents, but shall be entitled to enforce any requirements in the Contract Documents specifying particular means, methods, techniques, sequences, or procedures.

10.4 The Designer shall be an Owner's representative during the construction period. The duties, responsibilities and authority of the Designer as the Owner's representative during construction are as set forth in the Contract Documents.

ARTICLE 11. CONTRACT TIME

11.1 Within fourteen (14) days, or within a time set by mutual consent of the Parties, after execution of the Contract Agreement by the parties, the Contractor shall prepare and submit to the Designer and Owner for review and approval a preliminary progress schedule for the Work pursuant to the requirements stated in the Contract Documents.

11.2 Within fourteen (14) days after execution of the Contract Agreement by the parties, or within the time set by mutual consent of the Parties, the Contractor shall submit to the Designer a Submittal Register listing all Submittals the Contractor is required to make or proposes to make under the Contract Documents, the dates on which the Contractor proposes to make such Submittals and the dates by which the Contractor reasonably requires a response from the Designer with respect to each Submittal. The dates submitted shall be incorporated into the Contract Construction Schedule as Completion Dates when they have been approved or modified by the Owner. The Designer shall not be required to review any Submittal from the Contractor until a Submittal Register acceptable to and approved by the Owner has been submitted by the Contractor.

11.3 Not later than thirty (30) days following execution and delivery of the Contract Agreement by Owner to Contractor, or upon a date agreed to by mutual consent of the Parties, the Owner shall deliver to the Contractor a Notice to Proceed. The Notice to Proceed shall state a commencement date on which the Contractor will begin the Work to be performed under the

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Agreement. The Contract Time shall be measured from said specified commencement date. The commencement date stated in the Notice to Proceed shall not be earlier than three (3) days after the Notice to Proceed is served on the Contractor.

If, other than by mutual agreement, said specified commencement date is more than thirty (30) days after the date of execution and delivery of the Agreement from Owner to Contractor and the Contractor believes said delay justifies an increase in Contract Price and/or an extension of Contract Time, the Contractor may make a claim therefore as provided in Article 14 and/or Article 15.

No Work shall be done prior to the date specified in the Notice to Proceed.

A final Contract Construction Schedule shall be submitted for approval by the Contractor, Designer, and Owner no later than thirty (30) days after Notice to Proceed. No payments shall be due the Contractor until this schedule is approved by all parties.

11.4 The Contract Construction Schedule is a Contract Document. The Contractor represents that the Contract Construction Schedule has been reviewed in detail, that the Contractor participated in its preparation, that all of the activities which impact, limit, or otherwise affect the time of completion of the Work are shown in the Contract Construction Schedule and that all of the activities of others which impact, limit, or otherwise affect the start, duration, or completion of the Contractor's activities are also shown. The Contractor further represents that the Contractor can and will complete each activity within the time shown for that activity. Time is of the essence with respect to each such activity and Completion Date.

11.5 If the Contractor submits a construction schedule, progress report, or any other document that indicates or otherwise expresses an intention to achieve completion of the Work prior to any Completion Date required by the Contract Documents or prior to expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to so complete the Work shall be created or implied.

11.6 If the Contractor, for reasons beyond the Contractor's control, is delayed in beginning any activity, the Contractor shall, nevertheless, have the same number of days as is shown in the Contract Construction Schedule for the activity, and the affected activity and any succeeding activity that is dependent upon that activity shall be adjusted accordingly; provided that at any time the Owner, by means of a Change Order, may require the Contractor to work overtime, to increase labor forces or to take any necessary or appropriate action to decrease the time required for any activity, and the Contractor shall be entitled to an adjustment in the Contract Price computed in accordance with Article 15 of these General Conditions.

11.7 At any time, the Owner may order the Contractor, on seven (7) days written notice, to begin any activity earlier than the starting date shown on the Contract Construction Schedule.

11.8 Should the Contractor fail to start any activity on the start date shown in the Contract Construction Schedule or as it may have been adjusted, or become delayed, the Contractor shall, without being entitled to any increase in the Contract Price or other compensation, work overtime, increase labor forces or take such other action as may be necessary or appropriate to complete the

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activity by the Completion Date shown on the Contract Construction Schedule, or as such Completion Date may have been adjusted.

11.9 The Designer and Owner or his Construction Consultant shall monitor progress of the Work at all times and the Contractor shall cooperate with such monitoring and provide any and all information with respect to the progress of the Work and scheduling as the Owner may reasonably require.

11.10 On a monthly basis, the Contractor shall revise the Contract Construction Schedule, showing any adjustments made by any Change Order, the progress of the Work, and any days gained or days lost with respect to any activity, and shall furnish copies thereof to the Owner and Designer.

11.11 Should any monthly revision of any Contract Construction Schedule show that the Contractor is behind on any activity, the late completion of which could delay Substantial Completion of the Work, the Owner shall be entitled to withhold from the next Progress Payment due the Contractor an amount not exceeding the amount the Owner would be entitled to in Liquidated Damages, should Substantial Completion be delayed by the same number of days that the Contractor is currently behind schedule. If, subsequently, the Contractor's progress, as shown by any succeeding monthly revision to the Contract Construction Schedule, is such that the anticipated delay no longer exists, the Owner shall pay with the Progress Payment next due to the Contractor such amounts as have been withheld in accordance with this paragraph.

11.12 The Owner shall have the right to perform Work, hire and employ labor and craftsmen, rent equipment, subcontract with other parties, or do anything that the Owner deems necessary or appropriate to remedy or cure any delay by the Contractor in the progress of the Work. Such action by the Owner shall not, in any way, affect, void or limit any warranty, guaranty or other responsibility of the Contractor under the Contract Documents. Such action may be taken by the Owner only after three (3) days written notice to the Contractor. All costs incurred by the Owner in taking any such action shall be charged to the Contractor and deducted from any amounts remaining due under the Agreement.

11.13 The Contractor may be entitled to an extension of the Contract Time (but no increase in the Contract Sum) for delays arising from unforeseen causes beyond the control and without the fault or negligence of the Owner, the Contractor or the Contractor's Subcontractors as follows:

- a) Labor disputes and strikes that directly impact the critical path activities of the Contract Construction Schedule;
- b) Acts of God, tornado, fire, hurricane, blizzard, earthquake, typhoon, or flood that damage completed Work or stored materials.
- c) Acts of the public enemy; acts of the State, Federal, or local government in their sovereign capacities.
- d) Abnormal inclement weather.

11.14 On any day that the Contractor considers that the Project is delayed by adverse weather conditions, the Contractor shall identify in writing to the Designer and the Owner the adverse weather conditions affecting each activity, the specific nature of the activity affected, the number of hours lost, and the number of and identity (by responsibility or trade) of workers affected and shall obtain from the Designer written recognition of the delay. The time for performance of this Contract includes an allowance for a number of calendar days which may not be suitable for construction Work by reason of adverse weather. The Contract Time will be extended if the Owner and Designer agree with the adverse weather delay.

11.15 If the Contractor believes that the progress of the Work has been adversely affected by adverse weather recognized by the Designer during a particular month, the Contractor shall submit a written request for extension of time to the Designer. Such a request for time extension of the Contract Time shall be submitted in writing to the Designer, copies to the Owner, within twenty days following the cause for delay. In case of continuing cause for delay, the Contractor shall notify the Designer, with copies to the Owner, within twenty days of the beginning of the delay and only one claim is necessary. The request shall include, but is not limited to, the following information:

- a) Detailed description of weather's effect on scheduled activities and its net effect on the critical path of the Project, and
- b) Weather records from the official weather station nearest the Project site and records of actual observation as contained in daily reports, correspondence, or other documentation.

11.16 The Contractor specifically recognizes that a delay by the Contractor in achieving any Completion Date can have the effect of delaying the Substantial Completion of the Project, that such delay in Substantial Completion of the Project will necessarily cause damages, losses, and expenses to the Owner, including, but not limited to and by way of illustration only, increased capitalized costs and interests for the Project, increased and extended Project overhead, Designer's and Consultant's fees, increased costs of construction, increased and extended operation costs of other facilities, and inefficiency and loss of productivity, and that such damages, losses, and expenses may not be readily identifiable or ascertainable at the time they are incurred or at any time. Therefore, and in recognition of these factors and the likelihood that actual damages from his delay will not be readily ascertainable, the Contractor agrees to pay to the Owner \$1,000.00 one thousand dollars, as Liquidated Damages per Day, for each day by which the failure to meet any Completion Date shown in the Contract Construction Schedule, adjusted in accordance with this Article, delays the Substantial Completion of the Project.

11.17 The Contractor shall not be entitled to any adjustment in the Contract Price or other compensation from the Owner for any delay in the completion of or progress on the Work that is caused by a force majeure condition or is otherwise not caused by the sole and direct act or omission of the Owner and the Owner's employees or agents.

11.18 The sum for Liquidated Damages is the amount stipulated in the Contract Agreement per day as Liquidated Damages reasonably estimated in advance to cover the losses to be incurred by the Owner by reason of failure of said Contractor(s) to complete the Work within the time specified, such time being of the essence of this Contract Agreement and a material consideration thereof.

ARTICLE 12. CHANGES IN THE WORK

12.1 Without invalidating the Contract Documents, the Owner may, at any time, or from time to time order additions, deletions, or revisions in the Work. Said additions, deletions, or revisions shall be authorized only by written Change Orders, Construction Change Directives or Field Orders. Upon receipt of a Change Order, Construction Change Directive or Field Order, the Contractor shall proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any change causes an increase or decrease in the Contract Price and/or an extension or shortening of the Contract Time, adjustments shall be made as provided in Article 11 and/or Article 13.

In order to expedite the Work and avoid or minimize delay in the Work that might affect the Contract Price or Contract Time, the Designer may issue a Change Order in the form of a Construction Change Directive which when signed by the Owner and Designer, directs the Contractor to proceed promptly with the Work involved. Any claim for an adjustment in Contract Price or Time, if not defined in the Construction Change Directive, shall be promptly made in writing.

12.2 The Designer may authorize minor changes or alterations in the Work not involving change in the Contract Price or in the Contract Time and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. Such alterations shall not invalidate the Contract Documents nor release the surety. If the Contractor believes that any minor change or alteration authorized by the Designer entitles him to an increase in the Contract Price and/or an extension of Contract Time, he may make a claim therefore as provided in Article 11 and/or Article 13.

12.3 Except in an emergency endangering life or property, no change shall be made by the Contractor except upon prior written Change Order, Directive or Field Order authorizing such Change.

12.4 Increases in the Contract Price and/or extensions of the Contract Time for additional Work performed by the Contractor shall only be in accordance with a written Change Order signed by the Owner and Designer. The Contractor shall not be entitled to additional time or to additional compensation for any Work performed or material supplied which is claimed to have been authorized or settled by an "oral" change, or by a "constructive" or "implied" change, or by a course of conduct, or by any action or non-action by the Owner, Designer, or any other persons, or by any means whatsoever other than by a written Change Order for such Work or material signed by the Owner and the Designer.

12.5 Changes in the Work resulting from emergency shall not invalidate the Contract Documents nor release the surety.

12.6 Neither the Owner nor the Designer shall be responsible for verbal instructions which have not been confirmed in writing, and in no case shall such instructions be interpreted as permitting a departure from the Contract Documents unless such instruction is confirmed in writing and supported by a proper Change Order, Construction Change Directive or Field Order, whether or not the cost is affected.

12.7 The Owner, in its sole discretion, may require that the Contractor notify the Contractor's sureties of any changes affecting the general scope of the Work or change in the Contract Price, and that the amount of applicable bonds shall be adjusted accordingly. If this requirement is exercised, the Contractor shall furnish proof of such adjustment to the Designer and the Owner.

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If this requirement is exercised, the Change Orders shall require written consent of the Contractor's surety. At the time of signing a Change Order, the Contractor shall be required to certify as follows:

"I certify that all sureties have been notified that my contract has been altered by the amount of this Change Order, and that a copy of the approved Change Order will be mailed to all sureties upon its receipt by me."

If this requirement is exercised, no payment to the Contractor on account of any Change Order shall become due or payable until written evidence of the surety's consent to the Change Order has been furnished to the Designer and to the Owner, and the furnishing of such written consent is a condition precedent to such payment.

12.8 The Contractor shall support all requests for Change Orders with a detailed cost breakdown showing cost of materials, labor, equipment, transportation, other items, Contractor's overhead and profit, and total cost, in accordance with methods defined in this Article, and, if the request seeks an extension of the Contract Time, with a time-related diagram which demonstrates specifically why an increase in construction time is needed.

12.9 When a request for a Change Order involves a Subcontractor, the Contractor shall provide quotation from same on Subcontractor's letterhead. The Subcontractor's quote shall list materials, equipment, and labor separately, and show overhead and profit.

ARTICLE 13. CHANGE OF THE CONTRACT PRICE

13.1 The Contract Price constitutes the total compensation payable to the Contractor for performing all Work under the Contract Documents. All duties, responsibilities, and obligations assigned to or undertaken by the Contractor shall be at his expense without change in the Contract Price. The Contract Price may only be changed by a Change Order.

13.2 Any claim for an adjustment in the Contract Price shall be in writing and written notice of any event, action, or non-action which may become the basis of a claim shall be delivered to the Owner and the Designer within three (3) days of the occurrence, or the beginning of the occurrence, of any such event, action or non-action giving rise to the claim. Such written notice is a condition precedent to the making of a claim, and such notice shall describe the basis of the potential claim with reasonable detail and clarity.

A claim shall be made in writing and shall be delivered to the Designer and the Owner no later than fourteen (14) days after such notice. The claim shall describe in detail the basis for the claim, with specific reference to any provisions of the Contract Documents, by paragraph, drawing number, or other specific identification, and shall state the amount claimed and how it is calculated. If the Contractor, at the time the claim is made, is unable to state the amount claimed with accuracy, the Contractor shall so state and provide the estimated amount and the basis on which the amount is to be calculated. At the earliest date practicable, but in no event more than thirty (30) days after Contractor's notice of claim, the Contractor shall supplement the claim with an accurate statement of the amount claimed and how it has been calculated. The Contractor shall provide, in writing, in support of the claim all such explanations, arguments, data, receipts, expert opinions, or other documents or information as the Contractor deems appropriate to be considered in support of the claim. A claim may properly be rejected by the Owner by reason of the Contractor's failure to submit adequate or accurate documentation or information, except that within seven (7) days after being given notice that the claim has been rejected on this basis, the Contractor may submit additional documentation or information. No claim for a change of the Contract Price shall be considered or granted (except solely at the discretion of the Owner) unless a claim is so made, nor shall the

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Contractor be entitled to any increase in the Contract Price unless the Contractor has given notice and made such a written claim within the times required. The Owner shall decide, after obtaining the advice of the Designer, whether an increase in Contract Price is warranted, and the amount of such increase shall be determined. Any change in the Contract Price resulting from any such claim shall be incorporated in a Change Order. Any change in the Contract Price or on a Change Order must be approved by the Board of County Commissioners or the County Manager and any decision by the Board or the Manager will be relayed to the Contractor within seven days after the Board's consideration. Any claim on which the Owner has not provided its decision to the Contractor within the applicable time period shall be deemed denied.

The Owner shall advise the Contractor of its decision with respect to the claim within fourteen (14) days of its receipt, or of the receipt of additional documentation or information if the absence of such has previously been the basis of rejection of the claim; provided, however, that if, in its sole discretion, the Owner deems that review or consideration of any part of the claim or any matter related thereto by its governing Board is necessary or appropriate, it shall so advise the Contractor and shall provide its decision to the Contractor within seven (7) days after such Board consideration, review or action. Any claim on which the Owner has not provided its decision to the Contractor within the applicable time period shall be deemed denied.

If the Contractor is not satisfied with the decision of the Owner, the Contractor may within seven (7) days of receipt of the Owner's decision initiate the mediation process as described in Appendix A to the General Conditions of the Contract for Construction.

13.3 In determining the amount of a Contract Price adjustment, the parties shall apply the following methods, as appropriate:

(A) Change in Work: The Owner and Contractor shall negotiate in good faith and attempt to agree upon the value of any change (extra or decrease) in Work prior to the issuance of a Change Order covering said Work. Such Change Order shall set forth the corresponding adjustment to the Contract Price. In the event the Owner and the Contractor are unable to agree, the Owner shall grant an equitable adjustment in the Contract Price.

(B) Emergency Work: In the event of emergency endangering life or property, the Contractor may be directed by the Designer to proceed on a time and material basis, whereupon the Contractor shall so proceed and keep accurately, in such form as may be required by the Designer, a correct account of costs together with all proper invoices, payrolls, and supporting data therefore.

13.4 Where the Contract Price is to be adjusted, the following limitations shall apply in determining the amount of adjustment:

(A) In the case of extra or emergency work, the Contract Price shall not be increased by more than the reasonable, actual, and documented net cost of the extra or emergency work plus ten percent (10%) of such net cost on Work performed by the Contractor and five percent (5%) thereof on any subcontracted Work for overhead and profit combined.

(B) In the case of a decrease in Work, the Contract Price shall not be decreased by less than the net cost of the deleted Work plus five percent (5%) of such direct net cost for profit and overhead.

The term 'net cost' as used herein shall include, as applicable, and shall be limited to, all direct labor, direct material, direct equipment, labor burden, sales taxes, shipping and handling charges, permits and fees, and insurance and bond premium adjustments, if any, attributable to

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the change. All other items of cost shall be considered as overhead and covered by the percentages allowed in sections A and B of this paragraph.

The Contractor shall provide worksheets or tabulations describing the method by which the direct net cost was calculated, and shall provide all data needed to support the calculation of the direct net cost, all in a form acceptable to the Owner.

13.5 Where the Contract Price is to be adjusted by negotiation, the Owner may authorize and designate the Designer to negotiate with the Contractor on behalf of the Owner; provided, however, any agreement reached between the Contractor and Designer shall be subject to approval by the Owner

ARTICLE 14. UNFORESEEN CONDITIONS

14.1 Should the Contractor encounter unforeseen conditions at the Project site materially differing from those shown on the Drawings or indicated in the Specifications or differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement, the Contractor shall immediately, and in no event more than three days later, give notice to the Owner of such conditions before they are disturbed. The Owner and the Designer shall thereupon promptly investigate the conditions and if they find that they materially differ from those shown on the Drawings and/or Specifications, they shall at once make such changes in the Drawings and/or Specifications as they may find necessary. Any increase or decrease in the Contract Price resulting from such changes shall be adjusted in the manner provided herein for adjustments as to extra and/or additional Work and changes. However, neither the Owner nor the Designer shall be liable or responsible for additional work, costs, or changes to the Work that could have been reasonably determined from any reports, surveys, and analyses made available for the Contractor's review or that could have been discovered by the Contractor through the performance of its obligations pursuant to the Contract Documents.

ARTICLE 15. CORRECTION OF WORK BEFORE FINAL PAYMENT

15.1 The Owner has the authority to stop or suspend work, and the Designer has the authority to order Work removed or to order corrections of defective Work or Work not in compliance with the Contract Documents where such action may be necessary to ensure successful completion of the Work.

Any work, materials, fabricated items, or other parts of the Work which have been found by the Designer to be defective or not in accordance with the Contract Documents shall be condemned and shall be removed from the Project by the Contractor, and immediately replaced by new Work in accordance with the Contract Documents at no additional cost to the Owner. Work or property of the Owner or others damaged or destroyed by virtue of such condemned Work shall be made good at the expense of the Contractor.

Correction of condemned Work described above shall be commenced by the Contractor within twenty-four (24) hours after receipt of notice from the Designer and shall make satisfactory progress, as determined by the Designer, until completed. Should contractor fail to proceed with required corrections, the owner may complete the work in accordance with Article 17.

Condemned Work removed shall be the property of the Contractor and shall be removed from the Project by him within ten (10) days after notice to remove it, and if not then removed, thereafter may be disposed of by the Owner without compensation to the Contractor and the cost of such disposal shall be deducted from amounts due or to become due to the Contractor.

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Should the cost of correction of the Work and, if applicable, disposal of the condemned Work by the Owner exceed amounts due or to become due the Contractor, then the Contractor and the Contractor's sureties shall be liable for and shall pay to the Owner the amount of such excess.

ARTICLE 16. CORRECTION OF WORK AFTER SUBSTANTIAL COMPLETION; WARRANTIES AND GUARANTIES

16.1 Neither the final certificate, Final Payment, occupation of the premises by the Owner, nor any provision of the Contract Documents, nor any other act or instrument of the Owner or the Designer shall relieve the Contractor from responsibility for negligence, defective material or workmanship, or failure to comply with the Contract Documents.

16.2 The Contractor shall, at the Contractor's sole cost and expense, make all necessary repairs, replacements, and corrections of any nature or description, interior or exterior, structural or non-structural, that shall become necessary by reason of defective workmanship or materials which appear within a period of two (2) years from the date of Substantial Completion; provided, however that notwithstanding the preceding, if any longer guarantee period is specified for any particular materials or workmanship under the Contract Documents, or under any subcontract, or in connection with any manufactured unit which is installed in the Project, or under the laws of the State of North Carolina, the longer guarantee period shall govern.

16.3 If, within any guarantee period, repairs or changes are required in connection with the Work, which are rendered necessary as the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract Documents, the Contractor shall, promptly upon receipt of notice from the Designer and without expense to the Owner:

- a) Completely repair or replace the Work so that it conforms to the Contract Documents;
- b) Correct all defects therein;
- c) Make good all damage which, in the opinion of the Designer, is the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the terms of the Contract Documents; and
- d) Make good any Work or material, or any equipment or contents disturbed in fulfilling any such guarantee.

If, in fulfilling the requirements of the Contract Documents or of any guarantee embraced therein or required thereby, the Contractor disturbs any work, facility, premises, or construction belonging to the Owner, the Contractor shall restore such disturbed work to a condition satisfactory to the Owner, and shall guarantee such restored work to the same extent as if it were Work under the Contract Documents.

If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee, the Owner may have the defects corrected, and the Contractor and the Contractor's sureties shall be liable for all expenses incurred. "Promptly" is defined as within twenty-four (24) hours for systems necessary to normal operation of the building and within seventy-two (72) hours for all other items. All special guarantees applicable to definite parts of the Work that may be shown in or required by Contract Documents shall be subject to the terms of this paragraph during the first year of the life of such special guarantee. Manufacturer's standard guarantees or warranties which do not comply with the time limit specified herein shall be extended by the Contractor automatically without further action on the part of the Owner or the Designer.

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16.4 In and before the expiration of the eleventh calendar month after the date of Substantial Completion, and at the request of the Owner, the Contractor, the Owner and the Designer shall make an inspection of the Work for the purpose of identifying defective workmanship and/or materials. If the Contractor, having been requested to do so by the Owner, fails to participate in such inspection, the Contractor shall be conclusively bound by any decision or ruling by the Designer as to any defective workmanship or material and as to the Contractor's responsibility for its repair or replacement.

ARTICLE 17. OWNER'S RIGHT TO DO WORK

17.1 If, during the progress of the Work or during any period of guarantee, the Contractor fails to prosecute the Work properly or to perform any provision of the Contract Documents, the Owner, after three (3) days written notice to the Contractor from the Designer, or from the Owner after Final Payment, may perform or have performed that portion of the Work and may deduct the cost thereof from any amounts due or to become due the Contractor. Notwithstanding any action by the Owner under this paragraph, all warranties and bonds given or to be given by the Contractor shall remain in effect or shall be given by the Contractor.

17.2 Should the cost of such action by the Owner exceed the amount due or to become due the Contractor, the Contractor and his sureties shall be liable for and shall pay to the Owner the amount of such excess.

ARTICLE 18. PARTIAL PAYMENTS

18.1 Within thirty (30) days after his initial receipt of the Construction Agreement for signatures, or on the date agreed to by mutual consent of both Parties, the Contractor shall submit to the Designer a Schedule of Values. The Schedule of Values shall indicate the value of the Work, including applicable overhead and profit, for each Division and section of the Project Specifications. The Designer and Owner shall be provided with the Contractor's estimate papers, Subcontractor agreements, supplier quotes, or other documents substantiating these values if so requested in writing by the Designer. The Contractor shall provide the requested documentation within seven (7) days after receipt of the Designer's written request. The Schedule of Values shall be subject to approval by the Owner, and if the Owner and the Contractor cannot agree upon the Schedule of Values, the Designer shall prepare it, and the Schedule of Values as prepared by the Designer shall be binding on the Owner and the Contractor. No Request for Payment shall be certified by the Designer until the Designer has issued approval of said Schedule of Values.

18.2 During the initial meeting between Owner, Designer and Contractor, a date will be provided to the Contractor by the Owner which will set forth the date each month a Request for Payment for Work done will be submitted. The Request for Payment for Work done will be provided to the Contractor by the Designer. The Request for Payment will show substantially the value of Work done (including the value of material delivered to the Project or stored by the Contractor at another site, subject to the conditions hereinafter set forth) during the previous calendar month, and shall sum up the financial status of the Work with the following information:

- a) Total Contract Price, including any adjustment thereto made pursuant to the Contract Documents.
- b) Value of Work completed and materials properly stored to date.
- c) Less amount retained.
- d) Less previous payments.

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- e) Current amount due.
- f) Balance remaining.

The Contractor, upon request of the Designer, shall substantiate the request with invoices, vouchers, payrolls, or other evidence.

18.3 When payment is requested or made on an account of stored materials, such materials must be stored on the Owner's property at such places and in such a manner as may be designated by the Designer. However, in the sole discretion of the Owner, with permission in writing from the Designer and Owner and under such circumstances as may be determined by the Owner, such materials may be stored in a bonded warehouse. The location and conditions for storage of such materials away from the Owner's property in a bonded warehouse shall be within the sole discretion of the Owner. Requests for Payment on account of stored materials shall be accompanied by paid invoices, bills of sale, warehouse receipts, or other documentary evidence establishing Owner's title to such materials, evidence that the stored materials are insured against loss and damage, and such other documentation as required by the Designer. Responsibility for the quantity, quality, and condition of such stored materials, whether stored on the Owner's property or away from the Owner's property, shall remain with the Contractor regardless of ownership or title. No payment shall be made on account of materials stored in a bonded warehouse unless the Contractor has acquired written permission from the Designer for such storage of materials and has complied with all conditions set forth in such permission regarding such storage of materials in a bonded warehouse.

18.4 Any Request for Payment received by the Designer on or before the date provided to the Contractor at the initial meeting by the Owner of each calendar month shall be certified for payment or returned for re-submission to the Contractor on or before ten days following the submission. The Designer's certification shall be for the amount which was requested or that which the Designer has decided was justly due, and shall state in writing to the Contractor and Owner the reasons for withholding payment of any or all of the amount requested.

18.5 The Designer may fail to certify all or part of any payment requested for any of the following reasons:

- a) Defective Work not corrected.
- b) Suits, actions, or claims of any character filed against the Contractor, or due to the operations of the Contractor, or information or notice that a suit, action, or claim will be filed or has been made.
- c) Information or notice that a Subcontractor or a supplier has not received payment.
- d) The balance unpaid of the Contract Price is insufficient to complete the Work in the judgment of the Designer or Owner.
- e) Damage to the Owner or another contractor.
- f) Inability of the Contractor to meet a Completion Date, including an anticipated failure to meet a Completion Date entitling the Owner to withhold anticipated Liquidated Damages.

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- g) Failure to furnish Submittal as required by the Contract Documents on a timely basis in accordance with the Submittal Register.
- h) Such other reason as to the Designer may appear prudent, proper, or equitable.

When grounds for withholding certification have been corrected, the Designer shall so certify to the Owner and the Owner shall make any payment due with respect to such certification as a part of his next payment after such certification.

18.6 No certificate issued or progress payment made shall constitute an acceptance of the Work or any part thereof.

18.7 The amount certified by the Designer for payment shall be ninety-five percent (95%) of the value of Work completed and materials stored since the Designer's last certification as shown on the Request for Payment, less any amounts not certified in accordance with paragraph 18.4, and this amount shall be paid by the Owner on or before the last business day of the month, but payment shall not be past due until not paid within fifteen (15) days thereafter.

18.8 After certification by the Designer that the Work is fifty percent (50%) complete, based on a determination that the Contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the value of the Contract, (except the value of materials stored on-site shall not exceed twenty percent (20%) of the Contractor's gross project invoices for the purpose of determining whether the Project is fifty percent (50%) complete) and the Contractor has provided to the Owner the written consent of its sureties to the cessation of further percentage retention, the amount certified for payment with respect to subsequent Requests for Payment shall be one hundred percent (100%) of the value of Work completed and materials stored since the Designer's last certification as shown on the Request for Payment, less any amounts not certified; provided, however, that the aggregate of periodic payments shall not exceed ninety-seven and one half percent (97.5%) of the Contract Price. If the Owner determines that the Contractor's performance under the Contract is unsatisfactory, the Owner may resume withholding percentage retention from each subsequent periodic payment application up to the maximum amount of five percent (5%) of the Contract Price.

ARTICLE 19. FINAL PAYMENT

19.2 Except as set forth in paragraph 19.1, within forty-five days after Substantial Completion of the Project, the remaining unpaid balance of the Contract Price shall be paid to the Contractor, less an amount equal to two and one-half times the value of punch list work or other work remaining to be completed or corrected, as reasonably estimated by the Owner.

19.3 Upon Substantial Completion, the Designer shall prepare and submit to the Contractor a deficiency list identifying all portions of the Work which are known by the Designer at that time to be incomplete or defective. Within thirty (30) days of receipt of this deficiency list, the Contractor shall complete and correct all items on that list along with all other Work required to achieve Final Completion of the Work. At any time prior to completion of the period of warranty, the Designer may submit to the Contractor a supplemental deficiency list, in which case the Contractor shall complete or correct any and all new items identified on the Supplemental deficiency list within the time period stipulated in Article 15.

19.4 Final Payment of any remaining balance of the Contract Price shall not be due to the Contractor until the Contractor achieves Final Completion of the Project.

19.5 The making and acceptance of Final Payment shall constitute a waiver of all claims by the Owner except:

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- a) Claims arising from unsettled liens or claims against the Contractor.
- b) Incomplete or faulty work or material existing at the time of Final Payment for which a deficiency list has been given to the Contractor.
- c) Faulty Work or materials appearing after Final Payment.
- d) Failure of the Contractor to perform the Work in accordance with the Contract Documents, appearing after Final Payment.
- e) As conditioned in the Performance Bond and Payment Bond.
- f) Claims made prior to Final Payment which remain unsettled.

19.6 The making and acceptance of Final Payment shall constitute a waiver of all claims by the Contractor except those claims previously made in writing and not finally resolved, except as noted in Paragraph 19.5.

19.7 The Designer shall not authorize Final Payment until all of the Work under the Contract Documents has been certified by the Designer as completed, proper and suitable for occupancy and use, and has been approved by all federal, state and local agencies having jurisdiction.

19.8 The final Request for Payment shall be identified on its face as such and shall be presented by the Contractor to the Designer within thirty (30) days of completion of the Work. Final payment of the retained amount due the Contractor shall be made by the Owner within thirty (30) days after the later of (i) full and Final Completion of all Work required by the Contract Documents, and certification of such Work as provided in 18.4; (ii) submission of the affidavits of other documentation required by Article 20; (iii) submission by the Contractor of a Request for Payment identified on its face as final and including the Designer's certification.

ARTICLE 20. CONTRACTOR, SUBCONTRACTOR AND SUPPLIER AFFIDAVIT

The Final Payment due the Contractor on account of the Contract Documents shall not become due until the Contractor has furnished to the Owner through the Designer: (A) an affidavit by the Contractor signed, sworn, and notarized to the effect that all payments for materials, services, or for any other reason in connection with the Work or performance of the Contract Documents have been satisfied and that no claims or liens exist against the Contractor in connection with the same; (B) affidavits from each Subcontractor and supplier signed, sworn, and notarized to the effect that (i) each such Subcontractor or supplier has been paid in full by the Contractor for all Work performed and/or materials supplied by him in connection with the Project, and (ii) that all payments for materials, services, and for any other reason in connection with the subcontract or supply contract have been satisfied and that no claims or liens exist against the Subcontractor or supplier in connection therewith; and (C) the written consent of the Contractor's sureties to Final Payment. In the event that the Contractor cannot obtain an affidavit, as required above, from any Subcontractor or supplier, the Contractor shall state in the Contractor's affidavit that no claims or liens exist against such Subcontractor or supplier to the best of the Contractor's knowledge, and that if any appear afterwards, the Contractor shall save the Owner harmless for all costs and expenses, including attorney's fees, on account thereof.

ARTICLE 21. ASSIGNMENTS AND SUBCONTRACTS

The Contractor shall not assign any portion of this Agreement nor subcontract the Work in its entirety without the prior written consent of the Owner. Except as may be required under terms

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of the bonds required by the Contract Documents, no funds or sums of money due or to become due to the Contractor under the Contract Documents may be assigned.

ARTICLE 22. MEASUREMENTS

Before ordering material or doing Work which is dependent for proper size or installation upon coordination with building conditions, the Contractor shall verify all dimensions and shall be responsible for the correctness of same. No consideration will be given for any claim based on differences between the actual dimensions and those indicated in the Contract Documents. Any discrepancies between the Contract Documents and the existing conditions shall be referred to the Designer for adjustment before any Work affected thereby is begun.

ARTICLE 23. CONTRACTOR AND SUBCONTRACTOR RELATIONSHIPS

23.1 Within thirty (30) days after initial receipt of the Contract Agreement for signatures the Contractor shall submit to the Designer and Owner for acceptance a current list of the names of Subcontractors and such other persons and organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for any and all portions of the Work. The Contractor shall provide this list at this time even if the Contractor was required to submit a list of proposed Subcontractors with the Contractor's bid. The Designer shall promptly reply to the Contractor in writing stating whether or not the Owner or the Designer, after due investigation, has objection to any such proposed person or entity or if it needs additional information to evaluate the persons on the list. Failure of the Designer to reply within ten (10) days after the Contractor has furnished all required information shall constitute notice of no objection.

The Contractor shall not contract with any such proposed person or entity to whom the Owner or the Designer has made reasonable objection. If the Designer or Owner has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner and the Designer have no reasonable objection. The Contractor shall make no substitution for any Subcontractor, person, or entity previously allowed without first notifying the Designer and Owner in writing and no substitution may be made if the Owner or Designer makes a reasonable objection to such substitution.

23.2 The Contractor agrees that the terms of the Contract Documents, including all portions thereof, shall apply to all Subcontractors of the Contractor as if they were the Contractor, and that the Subcontractors of the Contractor shall, by means of their subcontracts, be bound by all the terms of the Contract Documents.

23.3 Payments to Subcontractors shall be made in accordance with the provisions of N.C. Gen. Stat. §143-134.1.

ARTICLE 24. USE OF PREMISES

24.1 The Contractor shall confine apparatus, the storage of materials, the operations of workers, and the disposal of material to limits indicated by law, ordinances, permits, and directions of the Designer, if any.

24.2 The Contractor shall not load or permit any part of the Work to be loaded with a weight that will endanger its safety, intended performance, or configuration.

24.3 The Contractor shall enforce all of the Designer's instructions, including but not limited to, those regarding signs, advertisements, fires, and smoking.

ARTICLE 25. DISPUTE RESOLUTION

25.1 The laws of the State of North Carolina shall apply to the interpretation and enforcement of this Agreement. Any and all suits or actions to enforce, interpret, or seek damages with respect to any provision of, or the performance or nonperformance of, this Agreement shall be brought in the General Court of Justice of North Carolina sitting in Lee County, North Carolina, and it is agreed by the parties that no other court shall have venue with respect to such suits or actions. Appendix A shall be a part of the Contract Documents. Prior to initiating an action under this Article, any party to this Agreement shall initiate the mediation process as provided in Appendix A to these General Conditions of the Contract for Construction.

25.2 Any person or firm that expressly or impliedly agrees to perform labor or services or to provide material, supplies, equipment, work, performance or payment bonds, insurance or indemnification for the construction of the Project or the Work shall be deemed a party to this Agreement solely for the purpose of this Article 25. The Contractor, by means of its subcontracts, shall specifically require its Subcontractors to be bound by this Article.

ARTICLE 26. TAXES

26.1 The Contractor has included in the Contract Price and shall pay all taxes assessed by any authority on the Work or the labor and materials used therein. The Contractor shall maintain all tax records during the life of the Project and furnish the Owner with a complete listing of all taxes paid by taxing authority, invoice number, date, amount, etc. in a form acceptable to the Owner. The Contractor is required to maintain a file showing taxes paid on the Project for three (3) years after Final Payment or turn said documents over to the Owner for his files.

26.2 The following is a list of requirements to be followed by the Contractor in maintaining proper records and reporting the North Carolina Sales and Use Tax and Local Sales and Use Tax. The Contractor shall comply fully with the requirements outlined below, in order that the Owner may recover the amount of the tax permitted under the law.

- a) It shall be the Contractor's responsibility to furnish the Owner documentary evidence showing the materials used and sales and use tax paid by the Contractor and each of his Subcontractors. Such evidence shall be transmitted to the Owner with each pay request regardless of whether taxes were paid in that period.
- b) The documentary evidence shall consist of a certified statement by the Contractor and each of the Contractor's Subcontractors individually, showing total purchases of materials from each separate vendor and total sales and use taxes paid to each vendor. Certified statements must show the invoice number, or numbers, covered, and inclusive dates of such invoices.
- c) Materials used from Contractor's or Subcontractor's warehouse stock shall be shown in a certified statement at warehouse stock prices.
- d) The Contractor shall not be required to certify the Subcontractor's statements.

ARTICLE 27. OPERATION OF OWNER'S FACILITIES

The Contractor agrees that all Work done under the Contract Documents shall be carried on in such a manner so as to ensure the regular and continuous operation of the adjoining or adjacent facilities. The Contractor further agrees that the sequence of operations under the Contract Documents shall be scheduled and carried out so as to ensure said regular and continuous operation. The Contractor shall not close any areas of construction until so authorized by the Designer. The Contractor shall control operations to assure the least inconvenience to the public. Under all circumstances, safety shall be the most important consideration.

ARTICLE 29. TERMINATION OR SUSPENSION BY THE OWNER FOR CAUSE

If the Contractor fails to begin or complete the work under the Contract Documents within the time specified, or fails to perform the work with sufficient labor and equipment or with sufficient materials to insure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work for three days or if the Contractor shall become insolvent, be declared bankrupt, commit any act of bankruptcy or insolvency, commit any illegal act, or allow any final judgment to stand against the Contractor or its affiliated companies for a period of forty-eight hours, or for any cause whatsoever shall not carry on the work in an acceptable manner, the Owner may give notice in writing to the Contractor and the Contractor's sureties of such delay, neglect or default, specifying the same, and if the Contractor within a period of three (3) days after such notice shall not proceed in good faith and with reasonable speed to correct such delay, neglect, or default in accordance with such notice, the Owner shall have the full power and authority, to the extent permitted by law, without violating the Contract Documents, to take the prosecution of the work out of the hands of the Contractor, to appropriate or use any or all materials and equipment at the project as may be suitable and acceptable, and may enter into an agreement for the completion of the work or pursue such other methods as in the Owner's opinion shall be necessary or appropriate for the completion of the work in an acceptable manner. All costs and charges incurred by the Owner in proceeding in accordance with the preceding sentence, including attorneys' fees, and all costs incurred by the Owner in completing the work shall be deducted from any money due or which becomes due the Contractor. If such costs and expense incurred by the Owner shall be less than the sum which would have been payable under the Contract Documents if it had been completed by the Contractor, then the Contractor shall be entitled to receive the difference, but if such costs and expenses shall exceed the sum which would have been payable under the Contract Documents, the Contractor and the Contractor's surety shall be liable to the Owner for and shall pay to the Owner the amount of such excess.

ARTICLE 29. TERMINATION OR SUSPENSION BY THE OWNER FOR CONVENIENCE

29.1 The Owner may, without cause, and at any time and for any reason terminate Contractor's services and work at Owner's convenience. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.

29.2 Upon such termination, Contractor shall be entitled to payment only as follows: 1) the actual cost of the work completed in conformity with this Agreement; plus, 2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by Owner; plus, 3) ten percent of the cost of the work referred to Article 29.1 for overhead and profit. There shall be deducted from such sums as provided in this subparagraph the amount of payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not

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be entitled to any claim or claim of lien against Owner for any additional compensation or damages in the event of such termination and payment.

SECTION 00 72 13

GENERAL CONDITIONS OF THE CONTRACT

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. General Conditions of the Contract for Construction.

1.02 RELATED DOCUMENTS

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

EXHIBIT A
COUNTY OF LEE
RULES FOR IMPLEMENTING MEDIATED SETTLEMENT CONFERENCES
IN NORTH CAROLINA PUBLIC BUILDING CONTRACTS

Table of Rules

1. Initiating Mediated Settlement Conferences
 - A. Purpose of mandatory settlement conferences
 - B. Initiating the dispute resolution process

2. Selection of Mediator
 - A. Selection of certified mediator by agreement of the parties
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 - C. Appointment of mediator by the County of Lee
 - D. Mediator information directory
 - E. Disqualification of Mediator

3. The Mediated Settlement Conference
 - A. Where conference is to be held
 - B. When conference is to be held
 - C. Request to extend deadline for completion
 - D. Recesses
 - E. The mediated settlement conference shall not be cause for the delay of the construction project, which is the focus of the dispute

4. Duties of Parties and Other Participants

5. Authority and Duties of Mediators
 - A. Authority of mediator
 - B. Duties of mediator

6. Compensation of the Mediator
 - A. By agreement
 - B. By appointment

7. Mediator Certification

8. Rule Amendments

9. Time Limits

RULE 1. INITIATING MEDIATED SETTLEMENT CONFERENCES

A. Purpose of Mandatory Settlement Conferences. Pursuant to N.C.G.S. 143-128(f1) and (g), these Rules are promulgated to implement a system of settlement events, which are designated to focus the parties' attention on settlement rather than on claim preparation and to provide a structured opportunity for settlement negotiations to take place. Nothing herein is intended to limit or prevent the

parties from engaging in settlement procedures voluntarily at any time to or during commencement of the dispute resolution process.

B. Initiating the Dispute Resolution Process

1. The County reserves the right to require mediation as a precondition to litigation. The County also encourages all disputes to be resolved through good faith efforts of discussion by submitting a dispute to the Project Designer or Prime Contractor and working with the County before a party requests mediation.
2. Any party to a public building contract governed by Article 8, Chapter 143 of the NC General Statutes and identified in N.C.G.S. 143-128(f1) and (g) and who is a party to a dispute arising out of the building process in which the amount in controversy is at least \$15,000 may submit a written request to the County of Lee owner, notice to the Lee County Manager, for mediation of the dispute.
3. Prior to submission of a written request for mediation to the County of Lee owner, the parties requesting mediation:
 - a. If a prime contractor, must have first submitted its claim to the Project Designer for review. If the dispute is not resolved through the Project Designer's instructions, then the dispute is eligible for mediation in the Formal Dispute Resolution Process and the party may submit their written request for mediation to Lee County.
 - b. If the party requesting mediation is a subcontractor, it must first have submitted its claim for mediation to the prime contractor with whom it has a contract. If the dispute is not resolved through the Prime Contractor's involvement, then the dispute is eligible for mediation in the Formal Dispute Resolution Process, and the party may submit its written request for mediation to the County of Lee.
 - c. If the party requesting mediation is the Project Designer, then it must first submit its claim to the County of Lee to resolve. If the dispute is not resolved with the County of Lee's involvement, then the Project Designers' dispute is eligible for mediation in the Formal Dispute Resolution Process, and the Project Designer may submit its written request to the County of Lee for mediation.

RULE 2. SELECTION OF MEDIATOR

A. Selection of Certified Mediator by Agreement of the Parties. The parties may select a certified mediator pursuant to the Rules by agreement within 21 days of requesting mediation. The requesting party shall file with the County of Lee a Notice of Selection of Mediator by Agreement within 10 days of the request; however, any party may file the notice. Such notice shall state the name, address, and telephone number of the selected mediator, state the rate of compensation of the mediator, state that the mediator and opposing counsel have agreed upon the selection and rate of compensation, and state that the mediator is certified pursuant to these Rules.

B. Nomination and the County of Lee Approval of a Non-Certified Mediator. The parties may select a mediator who does not meet the certification requirements of these Rules, but who, in the opinion of the parties and the County of Lee, is otherwise qualified by training or experience to mediate the action.

If the parties select a non-certified mediator, the requesting party shall file with Lee County a Nomination of Non-Certified Mediator within 10 days of the request. Such nomination shall state the name, address and telephone number of the mediator, state the training, experience or other qualifications

of the mediator, state the rate of compensation of the mediator, and state that the mediator and opposing counsel have agreed upon the selection and rate of compensation.

Lee County shall rule on said nomination, shall approve or disapprove of the parties' nomination and shall notify the parties of its decision.

C. Appointment of Mediator by Lee County. If the parties cannot agree upon the selection of a mediator, the party or party's attorney shall notify Lee County and request, on behalf of the parties, that Lee County appoint a mediator. The request for appointment must be filed within 10 days after request to mediate and shall state that the parties have had a full and frank discussion concerning the selection of a mediator and have been unable to agree. The request shall state whether any party prefers a certified attorney mediator, and if so, Lee County shall appoint a certified attorney mediator. If no preference is expressed, Lee County may appoint a certified attorney or a certified non-attorney mediator.

D. Mediator Information Directory. To assist the parties in the selection of a mediator by agreement, the parties are free to utilize the list of certified mediators maintained in any county participating in the Superior Court Mediation Settlement Conference Program.

E. Disqualification of Mediator. Any party may request replacement of the mediator by Lee County for good cause. Nothing in this provision shall preclude mediators from disqualifying themselves.

RULE 3. THE MEDIATED SETTLEMENT CONFERENCE

A. Where Conference is to be Held. Unless all parties and the mediator otherwise agree, the mediated settlement conference shall be held in Lee County. The mediator shall be responsible for reserving a place and making arrangements for the conference and for giving timely notice of the time and location of the conference to all attorneys, unrepresented parties and other persons or entities required to attend.

B. When Conference is to be Held. The deadline for completion of the mediation shall be not less than 30 days nor more than 60 days after naming the mediator.

C. Request to Extend Deadline for Completion. A party, or the mediator, may request Lee County to extend the deadline for completion of the conference. Such request shall state the reasons the extension is sought and shall be served by the moving party upon the other parties and the mediator. If any party does not consent to the request, said party shall promptly communication its objection to Lee County.

Lee County may grant the request by setting a new deadline for completion of the conference.

D. Recesses. The mediator may recess the conference at any time and may set times for reconvening. If the time for reconvening is set before the conference is recessed, no further notification is required for persons present at the conference.

E. The mediated settlement conference shall not be cause for the delay of the building project which is the focus of the dispute.

RULE 4. DUTIES OF PARTIES AND OTHER PARTICIPANTS IN FORMAL DISPUTE RESOLUTION PROCESS

A. Attendance.

1. All parties to the dispute originally presented to the Designer or Prime Contractor for initial resolution must attend the mediation. Failure of a party to a construction contract to attend the mediation may result in Lee County's withholding of monthly payment to that party until such party attends the mediation.

2. Attendance shall constitute physical attendance, not by telephone or other electronic means. Any attendee on behalf of a party must have authority from that party to bind it to any agreement reached as a result of the mediation.

3. Attorneys on behalf of parties may attend the mediation but are not required to do so.

4. Sureties or insurance company representatives are not required to attend the mediation unless any monies paid or to be paid as a result of mediation require their presence or acquiescence. If such agreement or presence is required, then authorized representatives of the surety or insurance company must attend the mediation.

B. Finalizing Agreement. If an agreement is reached in the conference, parties to the agreement shall reduce the terms to writing and sign it along with their counsel.

C. Mediation Fee. The mediation fee shall be decided amongst the parties at the time mediation is requested.

D. Failure to Compensate Mediator. Any party's failure to compensate the mediators in accordance with N.C.G.S. 143-128(f1) and (g) may subject that party to a withholding of said amount of money from the party's monthly payment by Lee County.

RULE 5. AUTHORITY AND DUTIES OF MEDIATORS

A. Authority of Mediator.

1. Control of Conference. The mediator shall at all times be in control of the conference and the procedures to be followed.

2. Private Consultation. The mediator may communicate privately with any participant or counsel prior to and during the conference. The fact that private communications have occurred with a participant shall be disclosed to all other participants at the beginning of the conference.

3. Scheduling the Conference. The mediator shall make a good faith effort to schedule the conference at a time that is convenient with the participants, attorneys and mediator. In the absence of agreement, the mediator shall select the date for the conference.

B. Duties of Mediator.

1. The mediator shall define and describe the following at the beginning of the conference:

- a. The process of mediation;
- b. The difference between mediation and other forms of conflict resolution;
- c. The costs of the mediated settlement conference;
- d. That the mediated settlement conference is not a trial, the mediator is not a judge, and the parties retain their legal rights if they do not reach settlement;

- e. The circumstances under which the mediator may meet and communicate privately with any of the parties or with any other person;
 - f. Whether and under what circumstances communications with the mediator will be held in confidence during the conference;
 - g. The inadmissibility of conduct and statements as provided by N.C.G.S. 7A-38.1;
 - h. The duties and responsibilities of the mediator and the participants; and
 - i. That any agreement reached will be reached by mutual consent.
2. Disclosure. The mediator has a duty to be impartial and to advise all participants of any circumstance bearing on possible bias, prejudice or partiality.
 3. Declaring Impasse. It is the duty of the mediator to timely determine that an impasse exists and that the conference should end.
 4. Reporting Results of Conference. The mediator shall report to Lee County within 10 days of the conference whether or not an agreement was reached by the parties. If an agreement was reached, the report shall state the nature of the agreement. The mediator's report shall inform Lee County of the absence of any party known to the mediator to have been absent from the mediated settlement conference without permission. Lee County may require the mediator to provide statistical data for evaluation of the mediated settlement conference program.
 5. Scheduling and Holding the Conference. It is the duty of the mediator to schedule the conference and conduct it prior to the deadline of completion set by the Rules. Deadlines for completion of the conference shall be strictly observed by the mediator unless said time limit is changed by a written order from Lee County.

RULE 6. COMPENSATION OF THE MEDIATOR

A. By Agreement. When the mediator is stipulated by the parties, compensation shall be as agreed upon by the parties and the mediator provided that the provisions of N.C.G.S. 7A-38.1(k) are observed.

B. By Appointment. When the mediator is appointed by Lee County, the parties shall compensate the mediator for mediation services at the rate in accordance with the rate charged for Superior Court mediation. The parties shall also pay to the mediator a one time per case administrative rate in accordance with the rate charged for Superior Court mediation, which is due upon appointment.

RULE 7. MEDIATOR CERTIFICATION

All mediators certified in the Formal Dispute Resolution Program shall be properly certified in accordance with the rules certifying mediators in Superior Court in North Carolina, except when otherwise allowed by Lee County upon the request of the parties to the mediation. When selecting mediators, the parties may designate a preference for mediators with a background in construction law or public construction contracting. Such requirements, while preferred, are not mandatory under these Rules.

All mediators chosen must either demonstrate they are certified in accordance with the Rules Implementing Scheduled Mediated Settlement Conference in Superior Court or must gain the consent of Lee County to mediate any dispute in accordance with these Rules.

RULE 8. RULE MAKING

These Rules are subject to amendment by Lee County at any time the County deems it appropriate.

RULE 9. TIME LIMITS

Any time limit provided for by these Rules may be waived or extended by the mediator it appoints for good cause shown. If the mediator has not yet been appointed, the Designer of Record shall decide all waivers or extensions of time for good cause shown.

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Name: Lee County Buggy Building Waterproofing Restoration
- B. Project Address: 115 Chatham Street, Sanford, North Carolina 27330
- C. Owner: Lee County
- D. Engineer: The Contract Documents, dated 04-18-2025, were prepared by Stephen Ingram
- E. This work includes the provision of labor, material, equipment, supervision and administration to integrate the work outlined in these specifications into the total building system such that no leakage into the system occurs. In general, the scope of work in the Base Bid includes:
 - 1. Exterior Wall Restoration:
 - a. Replace through wall flashings where indicated in Contract Drawings.
 - b. Repoint masonry mortar joints in accordance with Unit Prices and Quantity Allowances.
 - 2. At-Grade Waterproofing:
 - a. Replace backer rod and sealant at existing concrete sidewalk to masonry rising wall joint where indicated in Contract Drawings.
 - 3. Below Grade Waterproofing:
 - a. Remove surface improvements in area to be excavated including plantings, sidewalks, etc.
 - b. Excavate as required to replace existing concrete sidewalk.
 - c. Remove waterproofing system down to wall substrate. Prepare wall substrate to receive waterproofing system.
 - d. Provide below grade waterproofing system.
 - e. Provide prefabricated composite drainage panel along with base drain and route drainage to nearest discharge point as indicated in Contract Drawings.
 - f. Backfill excavated area sloped away from building at minimum 2% slope.
 - g. Replace surface improvements and plantings to match existing types.
- F. Provide electrical, plumbing, mechanical, and other related trade work necessary to facilitate project operations. Relocate or raise conduit, HVAC equipment, curbs, and/or plumbing necessary to comply with the requirements of these documents and conform to the requirements of the State Building Code.

1. Conduct construction operations so that heat, air conditioning, ventilation, electrical, telephone, gas, water, sanitary, storm sewer, and any other service required for the building operations are maintained at all times during normal working hours. Any shutdowns or interruptions shall be coordinated with and approved by the owner.
- G. General requirements and specific recommendations of the material manufacturers are included as part of these specifications. The manufacturers' specifications are the minimum standards required for the completed systems. Where specific items listed herein improve the standards required by the manufacturers, they take precedence where their compliance does not affect the manufacturers' guarantee or warranty provisions.
- H. Act as the Project Expeditor and coordinate work and schedules of others hired.

1.02 Asbestos Containing Roofing Materials (ACRM):

- A. Sample Testing Results: No materials were sampled or tested for asbestos.
- B. It is the intention of these specifications that no asbestos bearing materials be incorporated into the work. In the event the contractor determines unanticipated asbestos bearing materials present in the building components, stop work in the affected area, notify the Engineer and Owner, and provide temporary protection as required. Costs incurred due to the presence of hidden or unanticipated asbestos bearing materials will be authorized by Change Order to this contract.

1.03 REFERENCE STANDARDS

- A. CSI/CSC MF - Masterformat; 2016.

1.04 CONTRACT

- A. Project constructed under a single prime general construction contract between Owner and Contractor.

1.05 WORK UNDER OTHER CONTRACTS

- A. Separate Contract: Owner may award a separate contract for performance of certain construction operations at Project site.
 1. None
- B. Cooperate with separate contractors so work on those contracts are carried out smoothly without interfering with or delaying Work under this Contract.

1.06 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 49-division format and CSI/CSC MF numbering system.
 1. Section Identification: The Specifications use section numbers and titles to cross-reference Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete.

- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Interpret words and meanings as appropriate. Infer words implied, but not stated, as the sense requires. Interpret singular words as plural and plural words as singular where applicable as the context of the Contract Documents indicates.
 2. Imperative mood and streamlined language are generally used in the Specifications. Perform requirements expressed in the imperative mood. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall" "shall be" or "shall comply with" depending on the context, are implied where a colon (:) is used within a sentence or phrase.

END OF SECTION

SECTION 01 14 00

WORK RESTRICTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements for work sequence, work restrictions, occupancy requirements and use of premises.

1.02 RELATED DOCUMENTS

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

1.03 SUBMITTALS

- A. Background Checks: Provide background checks for employees anticipated to work on-site during the project.

1.04 WORK SEQUENCE

- A. Construct Work in phases to accommodate the Owner's use; if applicable, of the premises during the construction period; coordinate the construction schedule and operations with the Owner and Engineer.
- B. Construct the Work in phases to provide for public convenience. Do not close off public use of facility until completion of one phase of construction provides alternative usage.
- C. Schedule construction in such a manner that once work has commenced on one facility, the work force to remain at that facility continuously each workday through final completion at that facility.

1.05 WORK RESTRICTIONS

- A. Work hours generally performed during normal business hours.
 - 1. Provide notification to the Owner and Engineer 48 hours in advance of work outside of normal business hours. No work allowed without prior notification and authorization.

1.06 OCCUPANCY REQUIREMENTS

- A. Owner Occupancy:
 - 1. Owner occupies the premises during construction to conduct his normal operations. Cooperate with Owner in construction operations to minimize conflict and to facilitate Owner usage.

2. Conduct operations as to ensure the least inconvenience and the greatest amount of safety and security for the Owner, building occupants, and the general public.
3. Control noise from operations so that building occupants are not affected.

1.07 SECURITY

- A. Restrict the access of persons entering upon the Owner's property in connection with the work to the Contractor's Entrance and to the site of the work.
- B. Maintain an accurate record of the names and identification of visitors entering upon the Owner's property in connection with the work of this contract, including times of entering and times of leaving, and submit a copy of the record to the Owner weekly.
- C. Background Checks: No persons/personnel allowed on site without the following background checks: Nationwide, Sex Offender check, Social Security Number check. Provide this information to the Engineer/Owner 5 business days prior to the scheduled access for each person. Owner's decision on acceptability of personnel. Each person is required to wear a badge with name, photograph, and company name. Ensure background checks for persons are submitted to Owner and those persons denied access are not allowed on-site.

1.08 Use of Site

- A. Limit use of premises and confine construction operations to work in areas indicated and approved by Engineer and Owner. Do not disturb portions of site beyond areas in which the Work is indicated.
 1. Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 2. Perform Work in a way that does not restrict parking lots or other locations outside the work area from the facility. Maintain safe access for vehicles
 3. Move stored materials and equipment that interfere with operations of the Owner.
 4. Protect surface improvements including pavements, curbs, sidewalks, lawn and landscaped areas, utilities, etc.
 5. Repair to the Owner and Engineer's satisfaction, or to restore to condition at the time of award of Contract, or to make restitution acceptable to the Owner, damages to surface improvements resulting from, or attributable to, the work operation.
 - a. Repair damaged concrete by replacing full sections of concrete between control/expansion joints.
 - b. Fill ruts in grass areas and grade to original conditions. Provide grass seed and straw.
 - c. Replace disturbed landscaping in mulched or natural areas.
- B. Transportation Facilities
 1. Truck and equipment access:

- a. Avoid traffic conflict with vehicles of the Owner's employees and customers and avoid over-loading of street and driveways elsewhere on the Owner's property, limit the access of trucks and equipment to the designated areas.
 - b. Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the job site.
2. Contractor's vehicles:
- a. Require contractor's vehicles, vehicles belonging to employees of the contractor, and other vehicles entering the Owner's property in performance of the work the contract, to use only the designated access route.
 - b. Do not permit such vehicles to park on street or other area of the Owner's property except in the designated area.

1.09 Use of Building

- A. Maintain building in a weathertight condition throughout construction period.
- B. Take precaution against injuries to persons or damage to property.
- C. Protect building, its contents, and its occupants during construction period.
- D. Do not overload or permit the structure to be loaded with such weights that endanger its safety or to cause excessive deflection.
 - 1. Equally distribute materials placed on the structure.
- E. Properly secure materials or equipment placed on structure to prevent blow off during wind events. Ensure materials or equipment on structure does not interfere with drainage.
- F. Repair to the Owner and Engineer's satisfaction, or to restore to condition at the time of award of Contract, or to make restitution acceptable to the Owner, damages to the building and its contents resulting from, or attributable to, the work operation.
- G. Indoor Air Quality:
 - 1. Coordinate with the facility personnel to identify the area where work is performed daily and what HVAC equipment and personnel in the building may be affected by the work.
 - 2. Work with facility personnel to prevent odors or fumes from entering the building or where found to not be practical due to the work area, HVAC equipment limitations or other reasons; coordinate with facility personnel to have occupants relocated to an area of the building not affected by the work.
 - 3. When possible to safely shut down and seal HVAC equipment; as determined by the facility personnel, coordinate with facility personnel to have mechanical units affected by the planned work area and air intakes properly closed and sealed. After closing of mechanical units and air intakes, cover units and intakes with 6-mil polyethylene sheeting taped secure. Remove polyethylene sheeting before coordinating restart of units and intakes.
 - 4. Provide box carriage fans during work to move and circulate air away from intakes and units.

5. Where HVAC equipment is required to remain operational during work, coordinate with facility personnel to cover air intakes with charcoal filters prior to beginning work.
6. When starting work using materials which have odors or emit fumes, communicate with facility personnel within the building in the area of the work to determine if fumes or odors are being experienced. If fumes or odors are experienced, stop work until the cause is determined and remediated or occupants can be moved to an area not affected by the work.

END OF SECTION

SECTION 01 21 00

ALLOWANCES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements governing allowances.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections apply to this Section, including but not limited to:
 - 1. Section 04 05 24 - Masonry Repointing
 - 2. Section 04 20 00 - Unit Masonry

1.03 ABBREVIATIONS

- A. Abbreviations for typical units of measurement:
 - 1. Square Foot (SF)
 - 2. Cubic Foot (CF)
 - 3. Linear Foot (LF)
 - 4. Each (EA)

1.04 CONTINGENCY ALLOWANCE

- A. Include the specified contingency allowance in the base bid.
- B. Credit unused portion remaining at the completion of the contract back to the Owner.
- C. The Owner reserves the right to modify the contingency allowance prior to award of Contract.

1.05 QUANTITY ALLOWANCES

- A. Include the specified quantity allowances in the base bid. Use the unit price submitted on the Bid Form to compute the quantity allowances. The quantities indicated on the Bid Form are estimated quantities only for the purpose of comparing bids. Compensation for the unit price bid made for the exact quantity of work performed under the unit price item. Deductive amounts of unit price work included in the Contract Sum are calculated at 100% of the quoted add unit price.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SCHEDULE OF ALLOWANCES

- A. Contingency Allowance: Include a \$7,500.00 contingency allowance in the base bid.
- B. Quantity Allowances:
 - 1. Repoint 7,500 LF of Deteriorated Mortar Joints. Refer to Section 04 05 24 - Masonry Repointing.
 - 2. Replace 1,000 EA of Cracked, Broken, or Deteriorated Brick Masonry Units. Refer to Section 04 20 00 Unit Masonry.

END OF SECTION

SECTION 01 22 00

UNIT PRICES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements for unit prices.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections apply to this Section, including but not limited to:
 - 1. Section 04 05 24 - Masonry Repointing
 - 2. Section 04 20 00 - Unit Masonry

1.03 DEFINITION

- A. Unit price is an amount proposed by Bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.04 ABBREVIATIONS

- A. Abbreviations for typical units of measurement:
 - 1. Square Foot (SF)
 - 2. Linear Foot (LF)
 - 3. Each (EA)

1.05 UNIT PRICE MEASUREMENT

- A. Prior to performing work under a unit price as specified herein, notify the Engineer to allow for measurement of the actual quantities of work. Work performed under these items without prior approval and measurement is at the Contractor's expense.
- B. Maintain a daily log including visual documentation (i.e. digital photographs) showing dates, location and exact quantities of unit price work.
- C. Owner and Engineer reserve the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent party.

1.06 UNIT PRICE PAYMENT

- A. Include in unit prices costs associated with performing the unit price work including but not limited to labor, material, equipment, insurance, applicable taxes, overhead and profit, bonds, etc.

1.07 UNIT PRICE PERFORMANCE

- A. Install unit price work in accordance with the applicable specification sections and Contract Drawings.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SCHEDULE OF UNIT PRICES

- A. Provide a unit price for:
 - 1. Repoint Deteriorated Mortar Joint. Unit of Measurement: Linear Foot (LF). Refer to Section 04 05 24 - Masonry Repointing.
 - 2. Replace Cracked, Broken, or Deteriorated Brick Masonry Units. Unit of Measurement: Each (EA). Refer to Section 04 20 00 Unit Masonry.

END OF SECTION

SECTION 01 23 00

ALTERNATES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements for alternates.

1.02 RELATED DOCUMENTS

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

1.03 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction or in the products, materials, equipment, systems or installation methods described in the Contract Documents.

1.04 ALTERNATES

- A. Indicate on the Bid Form whether the alternate bid amount is to added to or deducted from the base bid in the event the alternate bid is accepted.
- B. The Owner reserves the right to accept or reject any or all of the alternate bids.
- C. Responsible for determining to his own satisfaction and for his own purposes the limits and extent of the work affected by the alternate bids and to make proper allowance therefore in the submission of alternate bid.
- D. Include the cost of each alternate bid as specified in the technical specification sections and as described on the drawings. Perform work required by the alternate bids in accordance with applicable specifications and drawings of the trade section affected.
- E. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate selected alternates into the Work. No other adjustments are made to the Contract Sum.
- F. The Owner reserves the right to delay the acceptance of the alternate bids during the bid holding period prior to accepting the contract without a change in the dollar amount of the alternate bids.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Apply fluid applied water repellent at South Elevation masonry walls as specified in Section 07 19 00 - Fluid Applied Water Repellent.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. This Section specifies administrative and procedural requirements for handling requests for substitutions after award of Contract.

1.02 RELATED DOCUMENTS

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

1.03 DEFINITIONS

- A. Substitutions: Requests for changes in products, materials, and equipment, of construction required by Contract Documents proposed by the Contractor are considered requests for "substitutions". The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by the Owner or Engineer.
 - 2. Specified options of products and construction methods included in Contract Documents.
 - 3. Determination of and compliance with governing regulations and orders issued by governing authorities.

1.04 SUBMITTALS

- A. Submit requests for acceptance of equivalent items in writing to the Engineer during the submittal process. No substitutions considered after acceptance of project submittals.
- B. Substitutions after award are considered solely for convenience and approved by Change Order in form of credit to the Owner. Bear additional costs related to making the substituted material or system work including additional engineering, material or system modifications, and time considerations relating to material or system installation requirements.
- C. Provide information sufficient for the Engineer to make a determination of equivalent items. Engineer's determination of the equivalency of a product is final. The Engineer reserves the right to request information or documentation for evaluation including but not limited to the following:
 - 1. Provide a letter describing in detail proposed changes, substitutions, or deviations from the project or manufacturer's specifications.
 - 2. A written explanation of why substitutions should be considered is required.
 - 3. Statement indicating why specified product cannot be provided.

4. Coordination of information, including a list of modifications needed to other parts of the work necessary to accommodate proposed substitution.
5. Product data including drawings, descriptions, and fabrication/installation procedures.
6. Samples where applicable.
7. Material test reports from a qualified testing agency indicating the interpreting test results for compliance with requirements.
8. Contractor's certification that proposed substitution complies with requirements in the contract documents and is appropriate for applications indicated.
9. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
10. If requesting product substitution after bid award, provide cost information including proposal of change in the contract sum.

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements for handling and processing Contract modifications.

1.02 RELATED DOCUMENTS

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

1.03 REFERENCE STANDARDS

- A. AIA G701 - Change Order; 2017.
- B. AIA G710 - Architect's Supplemental Instructions; 2017.
- C. AIA G714 - Construction Change Directive; 2017.

1.04 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: A detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time will be issued by the Engineer along with supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Engineer are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 5 days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, propose changes by submitting a request for a change to Engineer.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Division 1 if the proposed change requires substitution of one product or system for product or system specified.

- C. Proposal Request Approval:
 - 1. If sufficient contingency allowance funds remain, written approval will be provided by the Engineer in the form of an Allowance Authorization signed by the Engineer, Contractor and Owner.
 - 2. If contingency allowance funds are not available; upon approval by Owner, written approval will be provided by the Engineer in the form of a Change Order as provided in the Conditions of the Contract.
 - a. Form of Change Order: AIA G701.
 - b. Do not commence work or purchase materials for such change orders until written approval is received in the form of an executed Allowance Authorization or Change Order.
 - c. An executed Change Order is the only legal document which can change the Contract Sum or Time.

1.05 SUPPLEMENTAL INSTRUCTIONS

- A. Supplemental instructions authorizing minor changes in the Work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Engineer on AIA G710.

1.06 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Proposal Request; the Engineer may issue a Construction Change Directive on AIA G714, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. The Construction Change Directive will contain a description of the change in the Work and designate the method followed to determine the change in the Contract Sum or Contract Time.
 - 2. Submit unit costs, equipment rates and labor rates as requested by the Engineer and agree upon submitted rates before the work progresses unless directed to proceed in the absences of an agreement or in an emergency.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive. Provide a copy of those records the Engineer.
 - 1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

END OF SECTION

SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.02 RELATED DOCUMENTS

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

1.03 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.04 REFERENCE STANDARDS

- A. AIA G702 - Application and Certificate for Payment; 1992.
- B. AIA G703 - Continuation Sheet; 1992.
- C. AIA G706 - Contractor's Affidavit of Payment of Debts and Claims; 1994.
- D. AIA G706A - Contractor's Affidavit of Release of Liens; 1994.
- E. AIA G707 - Consent of Surety to Final Payment; 1994.

1.05 SUBMITTALS

- A. Sample Application for Payment Cover on AIA G702 .
- B. Schedule of Values: A schedule of values on AIA G703 Continuation Sheet consisting of a detailed breakdown of the Contract amount showing separate figures for labor and materials. The work listed under the various sections and subsections of the Specifications serve as the format for preparation.

1.06 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Submittals.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment Forms with Continuation Sheets
 - b. Submittals Schedule
 - c. Contractor's Construction Schedule
 2. Submit the Schedule of Values to Engineer along with Submittals.
 3. Sub schedules: Where the Work is separated into phases requiring separately phased payments, provide sub schedules showing values correlated with each phase of payment.
- B. Format and Content: Provide one line item for labor and one line item for material for each Specification Section.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Application for Payment Number.
 - b. Application for Payment Date.
 - c. Engineer's project number.
 - d. Period to for Schedule of Values.
 2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents.
 3. Provide several line items for principal subcontract amounts, where appropriate.
 4. Round amounts to nearest whole dollar; total to equal the Contract Sum.
 5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 6. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
 7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 8. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 9. Complete each item in the Schedule of Values and Applications for Payment. Include total cost and proportionate share of general overhead and profit for each item.
 10. Show temporary facilities and other major cost items that are not direct cost of work in place either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
 11. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.07 APPLICATION FOR PAYMENT

- A. Submit one electronic pdf of the application for payment on AIA G702.
 1. Indicate the date for each progress payment. The period of Work covered by each application is the period indicated in the Agreement

2. Provide on original AIA forms.
 3. Complete, notarize and execute each Application for Payment by a person authorized to legally sign documents.
 4. Show breakdown of the work with separate labor and material amounts on AIA G703 in accordance with the accepted Schedule of Values.
 5. Make each application consistent with previous applications and payments as certified by Engineer and paid for by Owner.
 6. Engineer will return incomplete applications without action.
- B. Payment Terms: Within 45 days of receipt of engineer-approved request, Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this Contract.
- C. Retainage: If the total contract amount exceeds \$100,000.00; to ensure the proper performance of this Contract the Owner shall retain 5% of the amount of periodic payment due to a Contractor.
1. Within 60 days after the submission of a pay request and one of the following occurs, as specified in the contract documents, the owner with written consent of the surety shall release to the contractor retainage on payments held by the owner:
 - a. The owner receives a certificate of Substantial Completion from the Engineer in charge of the project.
 - b. The owner receives beneficial occupancy or use of the project. However, the owner may retain sufficient funds to secure completion of the project or corrections on work. If the owner retains funds, the amount retained shall not exceed two and one-half times the estimated value of the work to be completed or corrected. Reduction in the amount of the retainage on payments with the consent of the contractor's surety.
- D. Match data of entries on the schedule of values and construction schedule. Include amounts of change orders issued before last day of construction period covered by the application.
- E. The Engineer reserves the right to contact material manufacturers directly, without contractor consent, to verify material invoices. Make material invoices available to the Engineer upon his request from the contractor or material manufacturer.
- F. When requesting payment for materials stored on site, submit with request an invoice for the materials and a certificate of insurance showing proof of coverage for the materials stored on site. Payment will be made only for stored materials. No payment will be made for anticipated overhead and/or profit.
- G. With each application for payment, also submit the following:
1. Unit Price Daily Logs: Submit copies of unit price daily logs and appropriate change order forms with each application for payment unless no unit price work was accomplished during the period covered by the application.
 2. AIA G706
 3. AIA G706A

- H. At substantial completion, submit an application for payment showing 100% completion for portion of the work claimed as substantially complete. Include documentation supporting claim that the work is substantially complete.
- I. At final completion, submit final application for payment with releases and supporting documentation not previously submitted and accepted, including but not limited to the following. Final payment not due until required documents have been submitted.
 - 1. Project Closeout Submittals
 - 2. AIA G706
 - 3. AIA G706A
 - 4. AIA G707

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - a. Project Schedule
 - b. General project coordination procedures.
 - c. Coordination.
 - d. Administrative and supervisory personnel
 - e. Project meetings

1.02 RELATED DOCUMENTS

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

1.03 SUBMITTALS

- A. Emergency contact list: Key personnel including home, office and mobile numbers, for the Owner, Contractor, Subcontractor(s), and Engineer
- B. Work schedule:
 - 1. Indicate start date, crew size, production rate, completion date, etc.
 - 2. Provide illustrated schedule on an aerial map.

1.04 COORDINATION

- A. Coordinate construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Coordinate its operations with those included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Coordinate the scheduling and sequence of operations with the Owner and Engineer.

- C. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Construction Schedule.
 - 2. Preparation of the Schedule of Values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Pre-Construction conference.
 - 7. Pre-installation conferences.
 - 8. Project closeout activities.

1.05 PROJECT MEETINGS

- A. Pre-Construction Meeting
 - 1. A Pre-Construction Meeting will be scheduled as soon as possible after the award of the contract. The Engineer's Representative will compile minutes of the meeting and will furnish a copy of the minutes to each person present.
 - 2. Attendance: Project Manager, Job Superintendent and Job Foreman, Owner, Engineer's Representative, manufacturer's representatives, installers of related work and other persons concerned with the installation and performance.
 - a. Provide 3 telephone numbers to contact the Contractor or his authorized representative in the event of an emergency after normal business hours.
 - 3. Minimum Agenda: Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and the Project Manager; channels and procedures for communication; construction schedule, including sequence of critical work; contract documents, including distribution of required copies of Drawings and revisions; processing of Shop Drawings and other data submitted to the Project Manager for review; rules and regulations governing performance of the work and procedures for safety, first aid, security, quality control, housekeeping and related matters.

- B. Progress Meetings:
 - 1. Attend monthly progress meetings for the purpose of informing the Owner and the Engineer regarding the status of the project. The Engineer will compile minutes of the meeting and will furnish a copy of the minutes to each person present.
 - 2. Attendance: Owner, Engineer, Contractor, Job Superintendent, material Supplier, and Subcontractors, as appropriate. Provide an updated job progress schedule at each weekly meeting. Be thoroughly familiar with the status of the project and be prepared to discuss and act upon situations that arise. The time, date and location of these meetings will be established during pre-construction conference.

3. Minimum Agenda: Review of work progress; field observations, problems, and decisions; identification of problems which impede planned progress; maintenance of progress schedule; corrective measures to regain projected schedules; planned progress during succeeding work period; coordination of projected progress; maintenance of quality and work standards; processing of field decisions and Change Orders; effect of proposed changes on progress, schedule, and coordination; other business relating to work.
- C. Substantial Completion Inspection Meeting
1. Scheduled by Owner and Engineer upon written notification of substantial completion of work from the Contractor.
 2. Attendance: Owner, Engineer, Contractor, material manufacturer.
 3. Minimum Agenda: Walkover inspection, verification of substantial completion, identification of punch list items and identification of problems potentially impeding issuance of warranties.
- D. Final Inspection Meeting
1. Scheduled by Owner and Engineer upon written notification of final completion of work from the Contractor.
 2. Attendance: Owner, Engineer, Contractor.
 3. Minimum Agenda: Verification of final completion including the completion of the punch list items.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

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

1.02 RELATED DOCUMENTS

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

1.03 SUBMITTAL PROCEDURE

- A. General: The Contractor is responsible for providing the submittals to the Engineer. Each submittal is required to be accepted in writing prior to commencement of work.
- B. Submission Requirements:
 - 1. Submit required submittals electronically in pdf format to the Engineer for review. The submittals will then be returned electronically to the Contractor with comments. Final submittals require written responses to submittal comments.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as specified below, commencing on Engineers receipt of submittal.
 - 1. Initial Review: Allow 7 work days for initial review of submittals.
 - 2. Allow 7 work days for processing each resubmittal.
 - 3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- D. Identification:
 - 1. Submit as one pdf file with bookmarks for each scheduled item.
- E. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals and provide letter describing in detail proposed changes, substitutions, or deviations from the project or manufacturers specifications. Include a written explanation of why substitutions should be considered under the appropriate tab.
- F. Transmittal: Package submittals appropriately for transmittal. Engineer will discard submittals received from sources other than Contractor. Include Contractors certification stating that information submitted complies with requirements of the Contract Documents.
- G. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.

1.04 SCHEDULE OF SUBMITTALS

- A. Refer to the applicable specification section for list of submittal requirements for each section.
- B. Submit the following submittal items electronically with a title page and/or pdf bookmark for each submittal item to meet the requirements specified herein:
 - 1. Section 00 52 13 - Copy of Executed Owner/Contractor Agreement along with Certificate of Insurance
 - 2. Section 00 61 13.13: Copy of Executed Performance Bond Form
 - 3. Section 00 61 13.16: Copy of Executed Payment Bond Form
 - 4. Section 01 14 00 - Work Restrictions
 - 5. Section 01 25 00 - Substitution Procedures
 - 6. Section 01 29 00 - Payment Procedures
 - 7. Section 01 31 00 - Project Management and Coordination
 - 8. Section 01 40 00 - Quality Requirements
 - 9. Section 01 73 00 - Execution Requirements
 - 10. Section 01 77 00 - Closeout Procedures
 - 11. Section 04 05 00 - Mortar and Grout
 - 12. Section 04 05 24 - Masonry Repointing
 - 13. Section 04 20 00 - Unit Masonry
 - 14. Section 07 13 26 - Self-Adhering Sheet Waterproofing
 - 15. Section 07 18 00 - Traffic Coatings
 - 16. Section 07 19 00 - Fluid Applied Water Repellent
 - 17. Section 07 65 00 - Through Wall Flashing
 - 18. Section 07 92 00 - Elastomeric Joint Sealants
 - 19. Section 31 00 00 - Earthwork
 - 20. Section 32 05 23 - Cement and Concrete for Exterior Improvements
 - 21. Shop Drawings: Shop drawings or letter stating installation of materials as detailed in the Contract Drawings unless properly authorized by the Engineer.
 - 22. Physical color samples as specified in the applicable specification section.

PART 2 PRODUCTS

2.01 SUBMITTALS

- A. General: Prepare and submit Submittals required herein and by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information is specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturers written recommendations.
 - b. Manufacturers product specifications.
 - c. Manufacturers installation instructions.
 - d. Manufacturers catalog cuts.

- e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with recognized trade association standards.
 - i. Compliance with recognized testing agency standards.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
- 1. Preparation: Include the following information, as applicable: dimensions, identification of products, fabrication and installation drawings, schedules, coordination requirements and notation of dimensions established by field measurements.
 - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
- D. Samples: Prepare physical units of materials or products, including the following:
- 1. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show range of color and texture variations expected. Samples include, but are not limited to, partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - 2. Submit three sets of Samples. Engineer will retain two Sample sets; remainder will be returned.
 - 3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Engineers sample where so indicated. Attach label on unexposed side.
 - 4. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and component as delivered and installed.
 - 5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity and used to determine final acceptance of construction associated with each set.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of engineers and owners, and other information specified.
- F. Product Certificates: Prepare written statements on manufacturers letterhead certifying that product complies with requirements.
- G. Installer Certificates: Prepare written statements on manufacturers letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- H. Manufacturer Certificates: Prepare written statements on manufacturers letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

- I. Material Certificates: Prepare written statements on manufacturers letterhead certifying that material complies with requirements.
- J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agencies standard form, indicating and interpreting test results of material for compliance with requirements.
- K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- L. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software used for calculations. Include page numbers.
- M. Manufacturer's Instructions: Prepare written or published information that documents manufacturers recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- N. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, and term of the coverage.

PART 3 EXECUTION

3.01 CONTRACTORS REVIEW

- A. Review each submittal, check for compliance with the Contract Documents and note corrections and field dimensions prior to submitting to Engineer.

3.02 ENGINEERS ACTION

- A. Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal item with an action stamp and will mark stamp appropriately to indicate action taken.
- B. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. This Section includes administrative and procedural requirements for quality assurance and quality control.
 - 2. Secure and pay costs of licenses and permits required by City, County and/or State authorities.

1.02 RELATED DOCUMENTS

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

1.03 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer.
- C. Authority Having Jurisdiction: AHJ

1.04 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.

1.05 SUBMITTALS

- A. Permit: Provide copy of construction permits along with required licenses or certifications required by the AHJ.

1.06 QUALITY ASSURANCE

- A. Perform quality assurance in accordance with governing Codes, referenced standards, established standards, or industry standards.
- B. Solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise necessary to perform the Work in accordance with the Contract. Solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating portions of the Work under the Contract, except where otherwise specified in the Contract Documents. Solely responsible to the Owner that the finished Work complies with the Contract Documents.
- C. It is the intent under this contract that workmanship be of the best quality consistent with the materials and construction methods specified. The presence or absence of the Owner's or Engineer's representative in no way relieves the Contractor of his responsibility to furnish materials and construction in compliance with the drawings and specifications. The Owner and Engineer have the authority to judge the quality and require replacement of unacceptable work or personnel.
- D. Cooperate in the execution of work and plan work in such manners as to avoid conflicting schedules or delay of work. If the work depends upon the work of another Contractor, report defects affecting the work to the Engineer. Commencement of work where such condition exists constitute acceptance of the other Contractor's work as being satisfactory to receive the work commenced. Coordinate work of trades under this contract in such a manner to obtain the best possible workmanship for the project. Install components of the work in accordance with the best practices of the particular trade. Notify the Owner sufficiently in advance of operations to allow for assignment of personnel.
- E. Solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Engineer, the Owner, the Owner's employees and agents, or other entity whatever relieves the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.
- F. Materials or methods described by words which, when applied, have a well-known technical or trade meaning are held to refer to such recognized standard. Standard specifications or manufacturer's literature, when referenced, are of the latest revision or printing unless otherwise stated, and are intended to establish the minimum requirements acceptable.
- G. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or accepted, deliver materials to the site in original packages or containers with seals unbroken and labels intact and do not open until reviewed and accepted by the Engineer. Notify the Engineer prior to such material's delivery.
- H. Provide new materials unless otherwise indicated.
- I. Provide workmanship in accordance with the best modern practice.

- J. Verify dimensions and conditions at the site prior to starting work and notify the Engineer immediately of any errors or inconsistencies.
- K. Maintain one set of the contract documents and accepted submittals at the job site.
- L. Correct deficiencies identified by Engineer and non-conforming work within 24 hours of receipt of notification, either verbally or written, and submit a plan of action for addressing the deficiencies and non-conforming work. Do not proceed with further tear-off or commencement of other work until deficiencies and non-conforming work are properly addressed.
- M. Control of Installation
 - 1. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
 - 2. Comply with manufacturers' instructions, including each step in the sequence
 - 3. Request clarification from Engineer before proceeding in the event manufacturers' instructions conflict with Contract Documents.
 - 4. Comply with specified standards as the minimum quality for the Work, except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
 - 5. Only allow Work performed by person qualified to produce workmanship of specified quality.
 - 6. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- N. Tolerances:
 - 1. Monitor tolerance control of installed products to produce acceptable work. Do not permit tolerances to accumulate.
 - 2. Comply with manufacturers' tolerances. Request clarification from Engineer in the event manufacturers' tolerances conflict with Contract Documents.
 - 3. Adjust products to appropriate dimensions; position before securing products in place.
- O. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
 - 1. Maintain applicable federal, state and municipal licenses.
 - 2. Be certified in writing for a minimum of 2 years by the material manufacturer to install the primary specified products.
 - 3. Have a minimum of 5 years' experience in installing the same or similar materials specified under the same firm name as that submitting the bid. If requested, submit a copy of firm's Articles of Incorporation to verify years in business. Crew workers on site are experienced and have a working knowledge of the system being installed.
 - 4. Principals of the firm to have a minimum of 10 years' experience in the estimating, supervision, management and administration of a contracting firm engaged in work similar to work as specified.
 - 5. Licensed by state work is occurring in for the type and dollar amount of work contemplated by these Contract Documents.
 - 6. Never filed bankruptcy or filed for protection from creditors.

7. During the construction and completion of work covered by these Specifications, if the conduct of workers of the various crafts is determined unsuitable or a nuisance to the Owner or Engineer, or if the workman is considered incompetent or detrimental to the work, order such party removed from the grounds with the person not returning during the course of work on the project.
 8. Superintendent: During the performance of work by the Contractor or subcontractors, provide an on site and full time superintendent/representative meeting the following requirements:
 - a. For the purpose of these Specifications the designation "superintendent" is hereby defined as the individual present on the job site while work is being performed, and whose primary responsibility is to supervise and direct the performance of the Work.
 - b. Be in attendance at the project site during the progress of the work and duties as superintendent limited to this project only. Supervise and instruct workmen without engaging in the work process. If superintendent is absent temporarily from the project, designate a competent foreman to assume duties. During the superintendent's absence, foreman cannot engage in the work process; supervise and instruct only. Likewise, communications given to the foreman are binding as if given to the Contractor.
 - c. Communicate matters pertaining to the Work with the Owner and Engineer. Do not make decisions regarding changes in the Work without the Owner and Engineer's knowledge.
 - d. Decision making authority and ability.
 - e. Able to demonstrate knowledge of work being installed.
 - f. Fluent in the English language (reading, writing and speaking).
 - g. In possession of mobile telephone.
 - h. Employed by the Contractor at least six months prior to project commencement.
 - i. Owner approval and Engineer acceptance.
 - j. Once approved, do not change the superintendent except with the consent of the Owner unless he proves unsatisfactory to the Owner or Contractor or is no longer employed.
 - k. Minimum of five 5 years continuous experience as a job superintendent.
 9. No later than ten days prior to the pre-construction conference, provide the Owner, in writing, the names of the proposed project manager, superintendent, and foreman for approval. If he so determines, the Owner, without giving cause, may request an additional name, or names, be submitted for approval. The Owner will notify the Contractor of his acceptance at least 48 hours prior to the pre-construction conference.
- P. Specialists: Certain sections of the Specifications require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists satisfy qualification requirements indicated and be engaged for the activities indicated.
- Q. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- R. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.07 QUALITY CONTROL

- A. The authorized representatives and agents of Owner permitted to inspect work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.
- B. Owner Responsibilities:
 - 1. Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - a. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
 - b. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- C. Contractor Responsibilities:
 - 1. Repair and protection of work and materials.
 - 2. Replace work or materials not conforming with requirements of the Specifications or damaged during the progress of the work before completion and acceptance of the project.
 - 3. Coordinate documents with manufacturer and perform such testing, reporting, and communication incidental to provisions of the warranty procedures.
 - 4. Inclement Weather
 - a. In the event of temporary suspension of work during inclement weather, or whenever the Engineer recommends, protect carefully its work and materials against damage or injury from weather. If work or materials have been damaged by reason of failure to protect the work, replace such materials.
 - b. During inclement weather and temporary suspension of work, inspect the facility no later than 9:00 AM each day for leaks and perform temporary repairs if necessary. Make inspections daily during extended periods of inclement weather. Upon arrival at the facility, inform the Owner of his presence and purpose.
 - c. If inspection of the facility does not occur by 9:00 AM on days of inclement weather and there is one or more leaks attributable to the Work, at 9:15 AM the Owner can exercise his right to contact an outside contractor to perform temporary repairs as necessary to prevent damage to the building, its contents and to minimize disruption. Reimburse the outside contractor an equitable amount as determined solely by the outside contractor. If the Contractor arrives at the project site after the outside contractor has been contacted, but before temporary repairs are made, reimburse the amount contractor the fixed amount of \$500.00, each occasion, for mobilization and/or travel expenses.

- d. In the event inclement weather occurs after normal business hours, Saturday, Sunday or holidays, make arrangements with the Owner to provide access to the building to inspect for leaks. Compensate Owner for providing personnel for the service on an hourly rate basis as determined solely by the Owner.
- D. Manufacturer's Field Services: During construction, perform quality assurance site visits monthly by manufacturer's technical representative to ensure materials are being properly installed and as required to obtain the specified warranty.
1. The first site visit performed within the first three (3) days of operations.
 2. Coordinate site visits with Engineer. Submit reports of findings within one week of inspection. Payment applications will be rejected until applicable reports are received.
 3. Inspections to be performed by an employee of the selected manufacturer that is assigned full time to their technical services department. Sales personnel are not acceptable for this function and may result in rejection of the work installed that does not fulfill this requirement.
 4. Manufacturer's final inspections performed only with REI personnel in attendance. A minimum of seven days' written notice is required. Manufacturer's final inspection conducted without REI personnel in attendance will be repeated at no additional cost to the Owner.
 5. Violation of these requirements results in the removal of that manufacturer for a period of not less than one year from the Engineer's accepted materials list.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 REPAIR AND PROTECTION

- A. On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Protect construction exposed by or for quality control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality control services.

END OF SECTION

SECTION 01 42 00

REFERENCE STANDARDS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Requirements relating to referenced standards.

1.02 RELATED DOCUMENTS

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

1.03 REFERENCE STANDARDS

- A. Reference standards are specified in Part 1 of the applicable specification section.
- B. For products or 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.
- C. Comply with the reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- D. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- E. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered by Contract Documents by mention or inference otherwise in any reference document.

1.04 BUILDING CODE

- A. Comply with the building code and energy conservation code/standard in effect in North Carolina and current on date of Contract Documents.
 - 1. 2018 North Carolina Building Code
 - 2. 2018 North Carolina Energy Conservation Code

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

1.02 RELATED DOCUMENTS

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

1.03 REFERENCE STANDARDS

- A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 USE CHARGES

- A. Include in Contract, cost or use charges for temporary facilities which are not chargeable to Owner. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, occupants of testing and inspecting agencies and personnel of authorities having jurisdiction.

1.05 QUALITY ASSURANCE

- A. Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241 .
- B. Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70 .
- C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- D. Develop and supervise an overall fire-prevention and first-aid fire-protection program for personnel at Project site. Review needs with local fire department and establish procedures. Instruct personnel in methods and procedures. Post warnings and information.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General: Provide new materials or utilize undamaged, previously used materials in serviceable condition if accepted by Engineer. Provide materials suitable for use intended.
- B. Fencing:
 - 1. Portable Chain-Link Fencing: Minimum 2-inch 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide with lockable gates. Provide non-permanent bases for support. _
- C. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- D. Water: Potable.
- E. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material with a self-contained or standalone exterior handwashing station.
- F. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110 to 120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.
- G. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure and the requirements of the local Governing agency.
- H. Ground Protection Mats: 4 foot by 8 foot, HDPE infused with rubber for traction mats designed to protect landscaping from construction equipment.

PART 3 EXECUTION

3.01 TEMPORARY UTILITIES

- A. Water Service: Water for construction purposes is available from the Owner at no charge. Operate exterior hose bids only with properly fitted handles. Remove at the end of each workday. Repair damage to hose bids or hose bib stems. Do not operate hose bibs with pliers.
- B. Electrical Power Service: Provide portable generators for electrical power requirements.
 - 1. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths do reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

3.02 CONSTRUCTION FACILITIES

- A. Temporary construction facilities include the following:
 - 1. Field Office: prefabricated, mobile units or job-built construction with lockable entrances and serviceable finishes including lights and utilities.
 - 2. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities. Located facilities at sites approved by Owner. Access inside the facility is not available.
 - a. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - b. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
 - c. Wash Facilities: Provide adequate hand washing stations.
 - d. Drinking-Water Facilities: Provide bottled-water, drinking-water units.
 - 3. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations at a location approved by the Owner. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Use of Owner's waste disposal facilities is not acceptable.
 - a. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material.

3.03 TEMPORARY BARRIERS AND ENCLOSURES

- A. Provide temporary barriers and enclosures for protection from exposure, foul weather, construction operations and other activities. Protect buildings and grounds from damages during construction.
- B. Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- C. Provide security controls to protect work and materials at the project site.
- D. Provide fencing to enclose the materials storage and staging area.
- E. Provide and maintain suitable temporary sidewalks, closed passageways, fences, or other structures required by law so as not to obstruct or interfere with traffic in public streets, alley ways, or private right-of-way. Leave an unobstructed way along public and private places for pedestrians and vehicles.
- F. Provide walks over and around all obstructions in public places. Maintain sufficient light and guards to protect persons from injury.
- G. Provide emergency egress from existing occupied areas at all times as required by AHJ. Maintain egress path in compliance with requirements of the applicable building code.

3.04 PROTECTION FACILITIES INSTALLATION

- A. Provide environmental protection by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Provide Erosion Control Measures:
 - 1. Provide silt fence in landscaped areas and gravel areas downstream from disturbed subgrade.
 - 2. Provide wattles along pavement surfaces downstream from disturbed subgrade.
 - 3. Provide silt sacks under storm grates collecting runoff from areas with disturbed subgrade.
- C. Provide premanufactured concrete washout apparatus or provide approved designated washout area.
- D. Provide premanufactured pop-up containment apparatus.

3.05 TREE AND PLANT PROTECTION:

- A. Contractors are hereby reminded and cautioned that care shall be exercised to protect trees and plants which are to remain during the progress of the Project. Suitable barriers shall be provided around all trees and plants that are to remain and which are in the construction area and product handling area. All damage to such trees and plants shall be repaired; broken limbs properly and neatly pruned and painted with pruning paint; all trunk damage neatly dressed and painted with pruning paint. Any trees and plants which are excessively damaged shall be replaced in like, kind, size, and species by The Contractor at no additional cost. All work shall be by a recognized and approved nursery.
 - 1. All grading around trees and plants to remain shall be such that the root system shall not be disturbed. Earth shall not be temporarily piled around trees and plants, nor shall earth be graded to the trees and plants above the natural root depth for that particular species.
 - 2. Established trees and plants, which are in the way of construction and which are in the material handling areas, shall be removed and stored for future replanting. The services of a recognized and approved nursery shall be employed to remove the trees and plants and prepare them for storage. Removed trees and plants shall be properly balled and burlapped in accordance with their size. During the time of storage, they shall be properly watered and cared for in accordance with the instructions from the nursery. After the construction work is completed, the stored trees and plants shall be replanted, and those trees and plants not replanted shall be disposed of as directed by the Owner. Provide storm water controls sufficient to prevent flooding from heavy rain.

3.06 PROJECT SIGNAGE

- A. Provide temporary signs to provide information to building occupants directing them away from construction operations.
- B. Provide signage inside adjacent buildings alerting occupants of the Work Area.

3.07 VEHICULAR ACCESS AND PARKING

- A. Parking for vehicles available only in the approved Set-up and Staging area. No other vehicle parking on site is allowed.
- B. Owner Personnel vehicles will be removed from the construction area prior to the start of construction.

3.08 TRAFFIC CONTROLS

- A. Obtain and erect street/parking lot signage as necessary to divert traffic away from staging areas, work area, etc. Coordinate signage requirements with the Owner and Engineer.
- B. Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
- C. Obey speed limit of 5 mph for construction vehicles.

END OF SECTION

SECTION 01 73 00

EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. General procedural requirements governing execution of the Work.

1.02 RELATED DOCUMENTS

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

1.03 SUBMITTALS

- A. List of Materials on the project site including manufacturer name and product name.
- B. Safety Data Sheets (SDS):
 - 1. Safety Data Sheets (SDS) for materials/products anticipated for use and stored or brought to the site for completion of this project.
 - 2. Maintain on site with the Superintendent a set of SDS for products/materials on site.
- C. Existing Damage Documentation: Existing damaged/dysfunctional components documentation (videotape, photos, etc.) including but not limited to asphalt spills, windows, walls, sidewalks, paving, ceilings, etc. Lack of submission prior to commencement of work indicates no existing damaged components and Contractor takes responsibility for damages caused by operations.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Material storage area designated by the Owner at the Pre-Bid and Pre-Construction Meetings and/or indicated in Contract Drawings.
 - 1. Store materials as required by the manufacturer and indicated in their installation instructions.
 - 2. Store materials as required by their respective specification section.
 - 3. Properly secure materials to resist wind events.
- B. Deliver and transport materials to project in accordance with the Owner's requirements and coordinate material deliveries with Owner.
- C. Hazardous Materials:

1. Use products, cleaners, and installation materials that are not considered hazardous.
2. Store chemicals in a fireproof cabinet. Store only like materials together in a cabinet. Ensure labels are intact or to place labels on chemicals prior to delivery to site.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Existing Conditions:
 1. The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of construction affecting the Work.
- B. Existing Utilities:
 1. The existence and location of utilities and construction indicated as existing are not guaranteed.
 2. Before construction, verify the location and points of connection of utility services.
 3. Before beginning work, investigate and verify the existence and location of utilities and other construction affecting the Work.
- C. Acceptance of Conditions:
 1. Examine areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance.
 2. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include a description of the work, list of detrimental conditions, list of unacceptable installation tolerances and recommended corrections.
 3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.02 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each material. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Upon discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.03 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- B. Install products at the time and under conditions that ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

3.04 STARTING AND ADJUSTING

- A. Test equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.05 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.06 CORRECTION OF THE WORK

- A. Restore permanent facilities used during construction to their specified condition.
- B. Replace components that are not up to specification standards.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. This Section includes procedural requirements for cutting and patching.

1.02 RELATED DOCUMENTS

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

1.03 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.04 QUALITY ASSURANCE

- A. Engineer's Acceptance: Obtain acceptance of cutting and patching before cutting and patching. Acceptance does not waive right to later require replacement of unsatisfactory work.
- B. Structural Elements: Do not cut and patch structural elements in a manner that changes their load-carrying capacity or load-deflection ratio. Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations sealed by a licensed Engineer in the state of the project showing integration of reinforcement with original structure.
- C. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety.
- D. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that change their load-carrying capacity that results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety.

- E. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that, in the Engineer's opinion, reduces the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- F. Cutting and Patching Conference: If extensive cutting and patching is required, before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.05 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, match the visual and functional performance of existing materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine surfaces and conditions under which cutting and patching are performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are removed, relocated, or abandoned, bypass such services before cutting to minimize interruption of services to occupied areas.

3.03 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete or Masonry: Cut using an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in Section 31 00 00 Earthwork where required by cutting and patching operations.
 - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 6. Proceed with patching after construction operations requiring cutting are complete.

- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that eliminate evidence of patching and refinishing.
 - 3. Floors and Walls: Where walls or partitions that are removed extend from one finished area into another, patch and repair floor and wall surfaces. Provide an even surface of uniform finish, color, texture, and appearance. Replace floor and wall coverings, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over unbroken surface containing the patch to the nearest joint or delineation between materials. Provide additional coats until patch blends with adjacent surfaces.
 - 4. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.
 - 5. Ceilings: Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

- D. Renovation Project Procedures
 - 1. Materials: As specified in technical sections, match existing products and Work.

2. Employ skilled and experienced installer to perform cutting and patching.
 3. Remove, cut and patch materials in a manner to minimize damage and to provide a means of restoring products and finishes to original condition.
 4. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with a neat transition to adjacent finishes.
 5. Where work abuts or aligns with existing construction, provide a smooth and even transition. Patch work to match existing adjacent work in texture and appearance.
 6. When a smooth transition with Work is not possible, submit recommendation to Engineer for review. Terminate existing surface along a straight line at a natural line of division when possible.
 7. Patch or replace portions of surfaces, which are damaged, lifted, discolored or showing other imperfections.
 8. Finish surfaces as specified in individual Product sessions.
 9. Cutting and patching completed in a manner such that the patched surfaces are compatible with the surfaces in which the repairs were made, both structurally and aesthetically as deemed appropriate by the Project Engineer.
- E. Restoration: Restore existing work, including concealed work not indicated or specified to be modified, and which is damaged or otherwise affected by construction operations, to a condition which existed before the work was commenced. Use workers skilled in reconstruction and alteration work where construction adjoins, connects to, or abuts existing work. Join Work in such a manner as to make the joining as inconspicuous as possible. Obvious patching of damaged Work is not acceptable. At the completion, ensure that the buildings and grounds are in first-class condition within the intent of these specifications, with parts well joined as required, connections completed, and facilities in working condition.

3.04 CLEANING

- A. Clean areas and spaces where cutting and patching is performed where required for construction or used as access.
- B. Remove paint, mortar, oils, putty and similar materials.
- C. Leave work in an acceptable completed condition.

END OF SECTION

SECTION 01 74 00

CLEANING AND WASTE MANAGEMENT

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Administrative and Procedural requirements for progress cleaning and construction waste management.

1.02 RELATED DOCUMENTS

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

1.03 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 DEFINITIONS

- A. Waste: Material that has reached the end of its intended use. Waste includes salvageable, returnable, recyclable and reusable material.
- B. Construction waste: Solid wastes including, but not limited to, building materials, packaging materials, debris and trash resulting from construction operations.
- C. Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.
- D. Hazardous waste: Material or byproduct of construction that is regulated by the Environmental Protection Agency and cannot be disposed in a landfill or other waste end-source without adherence to applicable laws.
- E. Trash: Product or material unable to be returned, reused, recycled or salvaged.
- F. Landfill: Public or private business involved in the practice of trash disposal.

1.05 CLOSEOUT SUBMITTALS

- A. Landfill charge tickets

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or cause damage to finished surfaces.

PART 3 EXECUTION

3.01 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials in a legal manner.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site:
 - 1. Maintain Project site free of waste materials and debris.
 - 2. Keep site free of nails, screws, fasteners and scrap metal. Utilize magnets as necessary to sweep parking lots, driveways and sidewalks. Responsible for repair or replacement of punctured tires of site occupants.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust impairs proper execution of the Work, broom-clean or vacuum the work area, as appropriate.
 - 3. If necessary, have a heavy-duty vacuum on site to remove small, loose debris from work area.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and do not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Final Acceptance.

- G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. remove paint, mortar, oils, putty, and similar materials. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.
- H. Waste Disposal: Burying or burning waste materials on-site is not permitted. Washing waste materials down sewers or into waterways is not permitted.
- I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Final Acceptance.
- J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- K. Limiting Exposures: Supervise construction operations to ensure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that prevents spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Remove waste materials from Owner's property and legally dispose of them.
- D. Separate, store and dispose of hazardous wastes in accordance with local and EPA regulations and additional criteria listed below:
 - 1. Do not incinerate building products manufactured with PVC or containing chlorinated compounds.
 - 2. Disposal of fluorescent tubes to open containers is not permitted.
 - 3. Do not co-mingle unused fertilizers with construction waste.

3.03 FINAL CLEANING

- A. Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 2. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including, waste material, litter, and other foreign substances.
 3. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 4. Remove tools, construction equipment, machinery, and surplus material from Project site. Properly dispose of unwanted surplus material.
 5. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 6. Remove debris and surface dust from roofs and walls.
 7. Clean transparent materials and glass in windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 8. Remove labels that are not permanent.
 9. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 10. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess foreign substances.
 11. Replace parts subject to unusual operating conditions.
 12. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - a. Inspection Procedures.
 - b. Project Record Documents.
 - c. Warranties.

1.02 RELATED DOCUMENTS

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

1.03 REFERENCE STANDARDS

- A. AIA G704 - Certificate of Substantial Completion; 2017.

1.04 SUBMITTALS

- A. Warranties: Submit copy of warranties to meet the requirements of their respective specification section.

1.05 SUBSTANTIAL COMPLETION

- A. Submit written certification to the Engineer that the Project is substantially complete along with the following:
 - 1. Prepare a list of items to be completed and corrected (Contractor's punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Notify Owner of pending insurance changeover requirements.
 - 3. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 4. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 5. Notify Owner of changeover in heat and other utilities.
 - 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 7. Complete final cleaning requirements, including touchup painting.
 - 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

- B. Substantial Completion Inspection: On receipt of written substantial completion certification, the Engineer will make a substantial completion inspection within 7 days after receipt of certification.
1. Should the Engineer consider the Work not substantially complete, he will notify the Contractor, in writing, stating the reasons. Complete the Work and send a second written notice to the Engineer, certifying the Project is substantially complete, at which time the Engineer will re-inspect the work.
 2. Should the Engineer consider the Work substantially complete, he will prepare and issue AIA G704 accompanied by the list of items to be completed or corrected (Punch List).
 3. A punch list of items will be prepared for correction and completion before the Final Inspection. Complete the punch list items within 15 days of the punch list inspection. If the Contractor fails to complete the punch list within this period, the Owner has the right to impose liquidated damages in the amount of \$1,000.00 for each consecutive day until the items are completed.

1.06 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Division 01.
 2. Submit signed copy of Engineer's inspection list of items to be completed or corrected (punch list) certifying each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Final Inspection: The submission of the signed punch list constitutes as written request for final inspection for acceptance. On receipt of request, Engineer along with the Owner's Representative will conduct a final inspection within 7 days of receipt of certification.
1. Should the Engineer consider that the Work is finally complete in accordance with requirements of the Contract Documents, Project Closeout Submittals will be requested.
 2. Should the Engineer consider that the Work is not finally complete, notification to the Contractor, in writing, stating the reasons will be made.
 3. Take steps to remedy the stated deficiencies and send a second written notice to the Engineer certifying that the Work is complete, at which time the Engineer will re-inspect the Work.

1.07 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.

1. Submit required record documents and warranties within 30 days of the punch list inspection. If the Contractor fails to properly submit required items within this period, the Owner has the right to impose liquidated damages in the amount of \$1,000.00 for each consecutive day until the items are properly submitted.
- B. Record Drawings: Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings.
1. Mark Record Prints to show where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 3. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 4. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Note related Change Orders and Record Drawings, where applicable.
- D. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
1. Completed and signed Engineer's Punch List
 2. Copy of Manufacturer's Final Inspection Report
 3. Landfill Charge Tickets
 4. Certificate of Occupancy from AHJ

1.08 WARRANTIES

- A. Warranties to commence on the date of Substantial Completion of the project.
- B. Waterproofing warranty as outlined in Section 07 13 26 - Self-Adhering Sheet Waterproofing.
- C. Traffic Coating warranty as outlined in Section 07 18 00 – Traffic Coatings.

- D. Elastomeric Joint Sealant warranty as outlined in Section 07 92 00 - Elastomeric Joint Sealants.
- E. Contractor's Warranty - utilize form contained in Section 00 65 36.
- F. Asbestos Free Warranty - utilize form contained in Section 00 65 37.

END OF SECTION

SECTION 04 05 00

MORTAR AND GROUT

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Provide mortar and grout for replacement masonry.
 - 2. Provide mortar for repointing.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections apply to this Section:
 - 1. Section 04 05 24 - Masonry Repointing
 - 2. Section 04 20 00 - Unit Masonry
 - 3. Section 07 65 00 - Through Wall Flashing

1.03 REFERENCE STANDARDS

- A. ASTM C91/C91M - Standard Specification for Masonry Cement; 2023.
- B. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2018.
- C. ASTM C150/C150M - Standard Specification for Portland Cement; 2022.
- D. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.
- E. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019a, with Editorial Revision.
- F. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2024.
- G. ASTM C476 - Standard Specification for Grout for Masonry; 2023.
- H. ASTM C595/C595M - Standard Specification for Blended Hydraulic Cements; 2021.
- I. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete; 2016.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Manufacturer's Instructions: Latest edition of the Manufacturer's current material specifications and installation instructions.

- C. Samples: Furnish mortar color samples to match existing mortar for acceptance by Engineer and Owner.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver masonry materials in original sealed containers marked with name of manufacturer and identification of contents.
- B. Store masonry materials under waterproof covers on planking clear of ground, and protect damage from handling, dirt, stain, water and wind.

1.06 MORTAR SAMPLING AND TESTING

- A. Sample and submit mortar for testing and analysis by a qualified testing firm to determine mortar mix requirements prior to work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I
- B. Hydrated Lime: ASTM C207 S
- C. Masonry Cements: ASTM C91/C91M, Type N
- D. Sand: ASTM C144
 1. Light colored sand for mortar for laying face brick.
 2. White plastering sand meeting sieve analysis for mortar joints for pointing and laying of structural facing tile units except that 100 percent passes No. 8 sieve and not more than 5 percent retained on No. 16 sieve.
 3. Test sand for color value in accordance with ASTM C40. Sand producing color darker than specified standard is unacceptable.
- E. Grout Aggregate: ASTM C404, Size 8
- F. Admixtures:
 1. No air-entraining admixtures or material containing air-entraining admixtures.
 2. No antifreeze compounds added.
 3. No admixtures containing added.
- G. Water: Clean and potable.
- H. Mortar Pigment:
 1. ASTM C979/C979M: Not to exceed ten percent of the weight of Portland cement.
 2. Carbon black not to exceed two percent of the weight of Portland cement.
 3. Color of mortar to match existing mortar.
- I. Liquid Acrylic Resin: A formulation of acrylic polymers and modifiers in liquid form designed for use as an additive for mortar to improve physical properties.

J. Blended Hydraulic Cement: ASTM C595/C595M, Type IS, IP, I (PM).

K. Mortar Cement: ASTM C1329, Type N.

2.02 MORTAR AND GROUT MIXES

A. Masonry Mortar: ASTM C270.

B. Grout:

1. Conform to ASTM C476 except as specified.

2. Fine Grout:

a. Portland cement or blended hydraulic cement: one part.

b. Hydrated lime: 0 to 1/10 part.

c. Fine aggregate: 2-1/4 to three times sum of volumes of cement and lime used.

3. Coarse Grout:

a. Portland cement or blended hydraulic cement: one part.

b. Hydrated lime: 0 to 1/10 part.

c. Fine aggregate: 2-1/4 to three times sum of volumes of cement and lime used.

d. Coarse aggregate: one to two times sum of volumes of cement and lime used.

4. Sum of volumes of fine and coarse aggregates: Do not exceed four times sum of volumes of cement and lime used.

PART 3 EXECUTION

3.01 MIXING

A. Mix in a mechanically operated mortar mixer for at least three minutes but not more than five minutes.

B. Measure ingredients by volume using a container with a known capacity.

C. Mix water with dry mortar ingredients in sufficient amount to provide a workable mixture which adheres to vertical surfaces of masonry units.

D. Mix water with grout dry ingredients in sufficient amount to bring grout mixture to a pouring consistency.

E. Mortar that has stiffened because of loss of water through evaporations:

1. Re-tempered by adding water to restore to proper consistency and workability.

2. Discard mortar that has reached its initial set or has not been used within two hours.

3.02 MORTAR USE LOCATION

A. Use Type N mortar for brick veneer walls above grade, repointing or other masonry work.

3.03 GROUT USE LOCATIONS

- A. Use fine grout for filling wall cavities and cells of concrete masonry units where the smallest dimension is 2 inches (50 mm) or less.
- B. Use coarse grout for filling wall cavities and cells of concrete masonry units where the smallest dimension is greater than 2 inches (50 mm).
- C. Do not use grout for filling bond beam or lintel units.

END OF SECTION

SECTION 04 05 24

MASONRY REPOINTING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Repointing of damaged or deteriorated mortar joints.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections apply to this Section:
 - 1. Section 04 05 00 - Mortar and Grout

1.03 PROJECT CONDITIONS

- A. Protect newly pointed joints from rain, until pointed joints are sufficiently hard enough to prevent damage.
- B. Cold Weather Protection:
 - 1. Utilize methods of protection when repointing in freezing temperatures.
 - 2. Comply with applicable sections of "Recommended Practices for Cold Weather Construction" as published by International Masonry Industry All Weather Council.
 - 3. Maintain surfaces at temperatures to prevent mortar from freezing or causing other damage to mortar.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Repointing Mortar: Refer to Section 04 05 00 - Mortar and Grout for mortar requirements.

PART 3 EXECUTION

3.01 REMOVAL OF EXISTING MORTAR JOINTS

- A. Cut out existing mortar joints, both bed and head joints, and remove by means of a toothing chisel or a special pointer's grinder, to a uniform depth of 3/4-inch, or until sound mortar is reached. Take care to not damage edges of existing masonry units to remain.

- B. Remove dust and debris from the joints by brushing, blowing with air or rinsing with water. Do not rinse when temperature is below freezing.

3.02 INSTALLATION

- A. Prior to application of mortar, dampen joints and allow masonry units to absorb surface water.
- B. Tightly pack mortar into joints in thin layers, approximately 1/4-inch thick maximum.
- C. Allow layer to become "thumbprint hard" before applying next layer.
- D. Pack final layer flush with surfaces of masonry units. When mortar becomes "thumbprint hard", tool joints.
- E. Tooling of Joints
 1. Tool joints with a jointing tool to produce a smooth, compacted, concaved joint.
 2. Tool joints in patch work with a jointing tool to match the existing surrounding joints.

3.03 CLEANING

- A. Clean exposed masonry surfaces on completion.
- B. Remove mortar droppings and other foreign substances from wall surfaces.
- C. First wet surfaces with clean water then wash down with a solution of soapless detergent specially prepared for cleaning brick.
- D. Brush with stiff fiber brushes while washing and thereafter hose down with clean water.
- E. Free clean surfaces from traces of detergent, foreign streaks or stains. Protect materials during cleaning operations including adjoining construction.
- F. Use of muriatic acid for cleaning is prohibited.

END OF SECTION

SECTION 04 20 00

UNIT MASONRY

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Provide brick masonry for the following:
 - a. Replacement of Cracked, Broken, or Deteriorated Brick Masonry Units.
 - b. As required to replace through-wall flashing where indicated.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections apply to this Section:
 - 1. Section 04 05 00 - Mortar and Grout
 - 2. Section 07 65 00 - Through Wall Flashing

1.03 REFERENCE STANDARDS

- A. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement; 2022.
- B. ASTM C67/C67M - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile; 2023.
- C. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2023.
- D. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale); 2023.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Samples: Review Owners existing veneer and match new veneer to existing for Owner approval.

PART 2 PRODUCTS

2.01 BRICK

- A. General: Provide shapes indicated and as follows for each form of brick.

1. Provide units without cores or frogs and with exposed surfaces finished for ends of sills and caps and for similar applications that otherwise expose unfinished brick surfaces.
- B. Provide special shapes for applications requiring brick of size, form, color and texture on exposed surfaces that cannot be produced by sawing.
1. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes and lintels.
 2. Provide special shapes for applications where shapes produced by sawing result in sawed surfaces being exposed to view.
- C. Face Brick: ASTM C216 and as follows:
1. Grade: SW
 2. Initial Rate of Absorption: Between 5 and 20 g/30 sq in per minute when tested per ASTM C67/C67M.
 3. Surface Coloring: Brick with surface coloring, other than flashing or sand-finished brick, withstand 50 cycles of freezing and thawing per ASTM C67/C67M with no observable difference in the applied finish when viewed from 10 feet.
 4. Type: FBS
 5. Size: Bricks manufactured to the following dimensions within tolerances specified in ASTM C216.
 - a. Modular: 3-1/2 to 3-5/8 inches thick by 2-1/4 inches high by 7-1/2 to 7-5/8 inches long. Provide solid uncored brick to avoid exposed holes.
 - b. Utility: 3-1/2 to 3-5/8 inches thick by 3-1/2 to 3-5/8 inches high by 11-1/2 to 11-5/8 inches long.
 6. Where shown to "match existing", provide face brick matching color, texture, and size of existing adjacent brickwork.
- D. Subject to compliance with the requirements, provide units from a single source.
1. General Shale Brick
 2. Statesville Brick
 3. Boral Brick Co.
 4. Taylor Clay Products
 5. Triangle Brick
 6. Lee Brick
 7. Engineers accepted equivalent

2.02 MORTAR AND GROUT MATERIALS

- A. Refer to Section 04 05 00 - Mortar and Grout.

2.03 JOINT REINFORCEMENT

- A. General: ASTM A951/A951M and as follows:
1. Hot-dip galvanized, carbon-steel wire for both interior and exterior walls.
 2. Wire Size for Side Rods: W1.7 or 0.148-inch diameter.
 3. Wire Size for Cross Rods: W1.7 or 0.148-inch diameter.

4. Provide in lengths of not less than 10 feet, with prefabricated corner and tee units.

2.04 MASONRY ANCHORS

- A. Bent Wire Ties: Rectangular units with closed ends and not less than 4 inches wide. Z-shaped ties with ends bent 90 degrees to provide hooks not less than 2 inches long.
 1. Fabricate wire from 1/4 inch diameter, hot-dip galvanized steel wire.
 2. Where coursing between wythes does not align, use adjustable ties composed of 2 parts; 1 with pintles, the other with eyes; with maximum misalignment of 1-1/4 inches.
- B. Corrugated Buck Anchor: Minimum 16-gauge hot dipped galvanized steel with corrugations, minimum width of 1-1/4 inch and length sufficient to extend no less than 3/4 inch from outside face of masonry veneer.
- C. Adjustable Masonry Veneer Anchors: Provide two-piece assemblies that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs or CMU, and as follows:
 1. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.

2.05 MASONRY CLEANER

- A. Submit brick and mortar manufacturer's written acceptance of proposed cleaner.

2.06 MASONRY ACCESSORIES

- A. Cavity Drainage Material: Provide trapezoidal shaped drainage material to suspend mortar droppings at unequal heights allowing moisture to drain from the cavity and maintain airflow within the cavity wall. The trapezoidal shaped Mortar Net is a 90% open nylon mesh with thickness of 1 inch to fully fill cavity.
- B. Weep Vent: One-piece, flexible extrusion manufactured from ultraviolet-resistant polypropylene copolymer, designed to weep moisture in masonry cavity to exterior, sized to fill head joints with outside face held back 1/8 inch from exterior face of masonry, in color selected from manufacturer's standard.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine conditions for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Prepare written report the listing conditions detrimental to performance.
- C. Verify that foundations are within tolerances specified.
- D. Verify that reinforcing dowels are properly placed.

- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Build cavity and composite walls and other masonry construction to the thickness shown.
- B. Build single-wythe walls to the widths of masonry units, using units of widths indicated.
- C. Cut masonry units with motor-driven saws to provide clean, sharp, unchipped edges. Cut units to provide a continuous pattern and to fit adjoining construction. Where possible, use full-size units without cutting. Install cut units with cut surfaces and, where possible, cut edges concealed.
- D. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- E. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
- F. Wetting of Brick: Wet brick before laying if the initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C67/C67M. Allow units to absorb water so they are damp but not wet at the time of laying.
- G. Provide weep vents spaced at 24 inches maximum.

3.03 REPLACEMENT OF MASONRY UNITS

- A. Cut out mortar joints surrounding masonry units being replaced.
 - 1. Units can be broken and removed provided surrounding units to remain are not damaged.
 - 2. Once the units are removed, carefully chisel out the old mortar and remove dust and debris.
 - 3. If units are located in exterior wythe of a cavity or veneer wall, exercise care to prevent debris falling into cavity.
- B. Dampen surfaces of the surrounding units before units are placed.
 - 1. Allow masonry to absorb surface moisture prior to starting installation of the replacement units.
 - 2. Butter contact surfaces of existing masonry and replacement masonry units with mortar.
 - 3. Center replacement masonry units in opening and press into position.
 - 4. Remove excess mortar with a trowel.
 - 5. Point around replacement masonry units to ensure full head and bed joints.
 - 6. When mortar becomes "thumbprint hard", tool joints.

3.04 CONSTRUCTION TOLERANCES

- A. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and the following:
- B. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, nor 1/2 inch maximum.

- C. For exposed bed and head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.

3.05 MORTAR BEDDING AND JOINTING

- A. Lay hollow masonry units as follows:
 - 1. With full mortar coverage on horizontal and vertical face shells.
 - 2. Bed webs in mortar in starting course on footings and in courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout.
 - 3. For starting course on footings where cells are not grouted, spread out full mortar bed, including areas under cells.
- B. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint).

3.06 CAVITIES

- A. Keep cavities clean of mortar droppings and other materials during construction. Strike joints facing cavities flush.
- B. Cavity-Wall Insulation:
 - 1. Place small dabs of adhesive, spaced approximately 12 inches o.c. both ways, on inside face of insulation boards.
 - 2. Fit courses of insulation between wall ties and other confining obstructions in cavity, with edges butted tightly both ways.
 - 3. Press units firmly against inside wythe of masonry or other construction.
 - 4. Fill cracks and open gaps in insulation with additional insulation or minimal-expanding spray foam with a low-pressure build.

3.07 MASONRY JOINT REINFORCEMENT

- A. General: Provide continuous masonry joint reinforcement as indicated. Install length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
 - 1. Space reinforcement not more than 16 inches on center vertically.
 - 2. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings. Reinforcement is in addition to continuous reinforcement.
- B. Cut or interrupt joint reinforcement at control and expansion joints.
- C. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections. Cut and bend reinforcing units as recommended by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.08 ANCHORING MASONRY VENEERS

- A. Anchor masonry veneers to wall framing with masonry-veneer anchors to comply with the following requirements:

1. Fasten each anchor through sheathing to wall framing/to CMU back-up wall with fasteners provided by anchor manufacturer suitable for back-up wall substrate.
2. Embed tie sections in masonry joints.
3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
4. Space anchors no more than 18 inches on center vertically and 24 inches on center horizontally, with not less than 1 anchor for each 2 sq. ft. of wall area. Install additional anchors within 8 inches of openings and at intervals, not exceeding 8 inches, around the perimeter.
5. Provide corrugated buck anchors anchored to the back-up wall spaced at 24 inches on center maximum along the top course of the replacement masonry for the through wall flashing system replacement.

3.09 REPAIR

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application.

3.10 CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Engineer's acceptance of sample cleaning before proceeding with cleaning of masonry.
 3. Clean brick by the bucket-and-brush hand-cleaning method described in BIA Technical Notes No. 20, using job-mixed detergent solution.
 4. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.

3.11 DISPOSAL

- A. Remove masonry waste and legally dispose.

END OF SECTION

SECTION 07 13 26

SELF-ADHERING SHEET WATERPROOFING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Provide surface preparation and self-adhered, rubberized asphalt sheet membrane waterproofing along with related accessories.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections, apply to this Section:
 - 1. Section 31 00 00 – Earthwork

1.03 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Manufacturer's Instructions: Latest edition of the Manufacturer's current material specifications and installation instructions.

1.04 REFERENCE STANDARDS

- A. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).

1.05 QUALITY ASSURANCE

- A. Manufacturer: Manufactured by a firm with a minimum of 10 years' experience in the production and sales of self-adhesive sheet membrane waterproofing.
- B. Installer: A firm with at least 3 years' experience in work of the type required by this section.
- C. Materials: Provide primary materials from a single source manufacturer.
- D. Pre-Application Conference: Hold a pre-application conference to establish procedures and to review conditions, installation procedures and coordination with other related work. Include review of special details and flashing during meeting.
- E. Manufacturer's Representative: Arrange to have trained representative of the manufacturer on site periodically to review installation procedures.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Store adhesives at temperatures of 40° F (5°C) and above to facilitate handling.
- D. Store membrane cartons on pallets.
- E. Keep away from sparks and flames.
- F. Completely cover when stored outside. Protect from rain.
- G. Protect materials during handling and application to prevent damage or contamination.
- H. materials that may come into contact with waterproofing membrane system.

1.07 PROJECT CONDITIONS

- A. Perform work when current and forecasted weather conditions are within the limits established by the material manufacturer.
 - 1. Do not apply membrane if the temperature is below 25°F (-4°C) or to a damp, frost covered, or otherwise contaminated surface.
- B. Proceed with installation when substrate construction and preparation work is complete and in condition to receive sheet membrane waterproofing.
- C. Warn personnel against breathing of vapors and contact with skin and eyes; wear appropriate protective clothing and respiratory equipment.
- D. Keep flammable products away from spark or flame. Post “No Smoking” signs. Do not allow use of spark-producing equipment during application and until all vapors have dissipated.
- E. Maintain work area in a neat and workmanlike condition. Remove empty cartons and rubbish from the site daily.

1.08 WARRANTY

- A. Provide written 5-year system warranty issued by the membrane manufacturer upon completion of the work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Sheet Membrane Waterproofing: Self-adhering, cold-applied composite sheet consisting of a nominal 60-mil thickness with 56 mil of rubberized asphalt and 4 mil of cross-laminated, high density polyethylene film per ASTM D3767.
 - 1. Polyguard 650 Membrane as manufactured by Polyguard Products, Inc.
 - 2. MAPETHENE HT Membrane as manufactured by MAPEI.

3. BITUTHENE 3000 Membrane as manufactured by GCP Applied Technologies.
4. MEL-ROL Membrane as manufactured by W.R. Meadows, Inc.
5. MiraDRI 860/861 as manufactured by Carlisle Coatings & Waterproofing Inc.

2.02 RELATED MATERIALS

- A. Surface Primer Roller-grade Adhesive:
 1. Liquid Adhesive:
 - a. A rubber-based, tacky adhesive which is specifically formulated to provide excellent adhesion.
 - b. A water-based, rubber-based adhesive which is specifically formulated to provide excellent adhesion.
 2. Sealant: A rubber-based sealant which is specifically formulated to provide excellent adhesion. The VOC (Volatile Organic Compound) content meets the SCAQMD 1168 less than 775 g/L.
- B. Detail Tape: Rubberized-asphalt waterproofing membrane laminated to polypropylene backing. The membrane is wound onto a disposable, silicone-treated release sheet to prevent the membrane from sticking onto itself while in the roll. Use Detail Tape for inside/outside corners, penetrations, patching damaged areas and transitions.
- C. Liquid Membranes:
 1. Semi-Self-Leveling Liquid Membrane: A two-component, semi-self-leveling, asphalt-modified, urethane material.
 2. Liquid Membrane: A two-component, asphalt-modified, urethane.
- D. Detail Sealant: A single-component, STPE, 100% solid moisture-cured, elastomeric sealant. It is an environmentally friendly, non-isocyanate product that replaces silicone and urethane sealants. It is also a low VOC / HAPS-free, cold-applied, self-adhesive, elastomeric sealant.
- E. Protection Board: Manufacturer's standard 1/4 inch thick semi-rigid protection board.
- F. Miscellaneous Materials: Surface conditioner, waterstop, primer, mastic, liquid membrane, tape, adhesives and other accessories specified or acceptable to manufacturer of sheet membrane waterproofing.

2.03 ACCESSORIES

- A. Termination Bar: Extruded 1 inch x 1/8 inch aluminum bar with holes pre-punched at 6 inches on center.
 1. Fasteners: 1/4 inch diameter metal-based expansion anchor with stainless steel pin of length to penetrate substrate a minimum of 1-1/2 inch.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine conditions of substrates and other conditions and notify the Engineer, in writing, of circumstances detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Refer to manufacturer's literature for requirements for preparation of substrates. Surfaces structurally sound and free of voids, spalled areas, loose aggregate and sharp protrusions. Remove contaminants, grease, oil and wax from exposed surfaces. Remove dust, dirt, loose stone and debris. Use repair materials and methods acceptable to manufacturer of sheet membrane waterproofing.
- B. Cast-In-Place Concrete Substrates:
 - 1. Do not proceed with installation until concrete has properly cured and dried minimum 7 days for normal structural concrete and minimum 14 days for lightweight structural concrete.
 - 2. Fill form tie rod holes with concrete and finish flush with surrounding surface.
 - 3. Repair bugholes over 1/2 inch long and 1/4 inch deep and finish flush with surrounding surface.
 - 4. Remove scaling to sound, unaffected concrete and repair exposed area.
 - 5. Grind irregular construction joints to suitable flush surface.
- C. Masonry Substrates: Apply waterproofing over concrete block and brick with smooth trowel-cut mortar joints or parge coat.
- D. Wood Substrates: Apply waterproofing membrane over securely fastened sound surface. Joints and fasteners flush to create a smooth surface.
- E. Treat joints and install flashing as recommended by waterproofing manufacturer.

3.03 INSTALLATION

- A. Refer to manufacturer's literature for recommendations on installation, including but not limited to, the following:
 - 1. Apply primer at rate recommended by manufacturer. Recoat areas not waterproofed if contaminated by dust. Mask and protect adjoining exposed finish surfaces to protect those surfaces from excessive application of primer.
 - 2. Delay application of membrane until primer is dry. Dry time varies with weather conditions.
 - 3. Seal daily terminations with troweled bead of mastic.
 - 4. Install cant bead where wall meets the footer.
 - 5. Install Sheet Membrane Waterproofing in straight lines avoiding wrinkles. Roll membrane in to ensure adhesion.
 - 6. Seal edges as required by the manufacturer.
 - 7. Install Termination Bar at the top edge of the Sheet Membrane Waterproofing.
 - 8. Provide drainage panel as specified in Section 33 46 16.16 - Geocomposite Subdrainage.

3.04 REPAIRS

- A. Inspect for damage just prior to installation of subsequent construction activities and make repairs in accordance with manufacturer's recommendation.

3.05 PROTECTION

- A. Protect completed membrane waterproofing from subsequent construction activities as recommended by manufacturer.

END OF SECTION

SECTION 07 18 00
TRAFFIC COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Waterproof coatings for traffic surfaces.

1.02 REFERENCE STANDARDS

- A. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2020a.
- B. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2016 (Reapproved 2021).
- C. ASTM D638 - Standard Test Method for Tensile Properties of Plastics; 2022.
- D. ASTM D903 - Standard Test Method for Peel or Stripping Strength of Adhesive Bonds; 1998 (Reapproved 2017).
- E. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015 (Reapproved 2021).
- F. ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser; 2019.
- G. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- H. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2020a.
- I. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- J. ICC-ES AC39 - Acceptance Criteria for Walking Decks; 2017, with Editorial Revision (2020).

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Include product characteristics and limitations. Identify dissolving solvents, fuels, and potential destructive compounds.
- C. Samples: Submit two samples of cured membrane, 2 inch by 2 inch in size, illustrating color, surface texture, and variations.

- D. Manufacturer's Installation Instructions: Include special field conditions required to install traffic membrane and potential incompatibilities with adjacent materials.
- E. Manufacturer's qualification statement.
- F. Applicator's qualification statement.
- G. Maintenance Data: Include procedures for stain removal, repairing surface, and cleaning.
- H. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with not less than three years of documented experience.
- B. Applicator Qualifications: Company specializing in performing installation of traffic membrane, with minimum three years documented experience.

1.05 MOCK-UPS

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Provide one mock-up, two feet long by two feet wide, with traffic coating system applied to representative substrate.
- C. Locate where directed.
- D. Mock-up may remain as part of work.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 74 19 - Construction Waste Management and Disposal for packaging waste requirements.
- B. Maintain storage area at minimum ambient temperature of 55 degrees F.
- C. Keep away from fire or open flame.

1.07 FIELD CONDITIONS

- A. Do not install materials when temperature is below 50 degrees F or above 90 degrees F.
- B. Maintain this temperature range, 24 hours before, during and 72 hours after application.
- C. Restrict traffic from area where materials are being installed or are curing.

1.08 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

- B. Manufacturer Warranty: Provide 2-year manufacturer warranty for delamination of system from substrate and degradation of waterproofing ability. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Polyurethane Traffic Coating:
 - 1. AVM Industries, Inc; System 620: www.avmindustries.com/#sle.
 - 2. Master Builders Solutions: www.master-builders-solutions.com/en-us/#sle.
 - 3. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 TRAFFIC COATINGS

- A. Traffic Decking Waterproof Coating System: Modified polyurethane system with base coat, intermediate coat, and top coat.
 - 1. Finished Coating Thickness: 49 mil, 0.049 inch, minimum.
 - 2. Color: Gray.
 - 3. Products:
 - a. AVM Industries, Inc; System 620: www.avmindustries.com/#sle.
 - b. Master Builders Solutions; MasterSeal Traffic 2500: www.master-builders-solutions.com/en-us/#sle.
 - c. Tremco Commercial Sealants & Waterproofing; Vulkem 350NF/950NF/951NF: www.tremcosealants.com/#sle.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate is ready to receive work, surface is clean, dry and free of substances that could adversely effect bond.
- B. Do not begin work until concrete substrate has cured at least 28 days and moisture content is 16 percent or less.
- C. Test concrete surfaces according to ASTM F710 for acceptable level of alkalinity.

3.02 PREPARATION

- A. Clean substrate surface free of foreign matter.
- B. Patch wood substrate with latex filler to produce surface conducive to bond.
- C. Patch concrete substrate with filler to produce surface conducive to bond.
- D. Install cant strips securely at intersecting surfaces.
- E. Protect adjacent surfaces.

3.03 INSTALLATION

- A. Apply system materials in accordance with manufacturer's instructions.
- B. Apply sealant to junction of horizontal and intersecting surfaces to achieve watertight seal.

3.04 PROTECTION

- A. Do not permit traffic over unprotected surfaces.

END OF SECTION

SECTION 07 19 00

FLUID APPLIED WATER REPELLENT

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Upon acceptance of Alternate No. 1, provide water repellent treatment to masonry walls on the South Elevation of the building including preparation of walls, protection of adjacent surfaces, and cleaning of residue.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections, apply to this Section:
 - 1. Section 04 05 00 - Mortar and Grout
 - 2. Section 04 05 24 - Masonry Repointing
 - 3. Section 04 20 00 - Unit Masonry

1.03 REFERENCED STANDARDS

- A. Municipal and State regulations governing cleaning, scaffolding and protection of adjacent properties.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Manufacturer's Instructions: Latest edition of the Manufacturer's current material specifications and installation instructions.

1.05 QUALITY ASSURANCE

- A. Spray Test:
 - 1. After water repellent has dried, spray coated surfaces with water.
 - 2. After surfaces have adequately dried, recoat surfaces that show water absorption.
- B. Manufacturer's Field Services:
 - 1. Provide written certification that surface preparation methods and final condition have manufacturer's approval and comply with the warranty.
 - 2. Furnish test area: Furnish results of test area absorption on each type of substrate. Utilize test results to determine application rate.
- C. Substrate Preparation Mock-up:

1. Before substrate preparation and product test mock-up, the following field evaluation will be done.
 - a. Prepare a 5 foot by 5 foot area for each preparation method to be evaluated by the Owner, Engineer, Manufacturer's Representative, and Contractor.
- D. Product Test Area:
 1. Before a sealer application, the following field evaluation will be done.
 - a. Prepare a 3 foot by 3 foot area for each test area to be sprayed with the water repellent. The area will be determined by the Engineer and Owner. Apply the water repellent at a rate to achieve a flood coat application. If recommended by the manufacturer, apply a second coat of water repellent.
 - b. After allowing five days for the sample to cure, run a RILEM uptake test on the treated area (s).

1.06 DELIVERY, STORAGE AND HANDLING

- A. Furnish materials in manufacturer's packaging with instructions for use.
- B. Store materials out of direct exposure to the elements using tarps and elevated off ground on pallets.

1.07 PROJECT CONDITIONS

- A. Environmental Conditions:
 1. Do not patch, repoint, wash down or wet surfaces when temperature is forecasted to drop below 40 degrees F within 24 hours.
 2. Do not use process that creates dust or dirt when wind speed is over 15 miles per hour.
- B. Protection:
 1. Protect windows, doorways, trim, roof and other surfaces from damage and remove stains, efflorescence, or other unsightly excess resulting from the work of this section.
 2. Protect surfaces and surrounding yards or landscape from damage due to work in this section.
 3. Schedule work with Engineer and Owner.
 4. Protect entrances to building with appropriate warning signs and barricades.
 5. Protect persons and property including pedestrian traffic.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Water: Clean and potable.
- B. Water Repellent: Isobutyltrialkoxysilane 40% minimum active penetrating ingredient.
 1. Brick Masonry Products:
 - a. Evonik Protectosil Chem-Trete 40 VOC

- b. Pecora Corporation Klere-Seal 940-S VOC
 - c. Prosoco Sure Klean Weather Seal Siloxane PD or Siloxane WB Concentrate
 - d. Sika Sikagard 701W
2. Concrete Masonry Unit Products:
- a. Evonik Protectosil Chem-Trete PB VOC
 - b. Pecora Corporation Klere-Seal 940-S VOC
 - c. Prosoco Sure Klean Weather Seal Siloxane WB Concentrate
 - d. Sika Sikagard 701W

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces to receive sealer of dirt, oil, grease, laitance, and other contaminants. Remove oil, grease and other automotive contaminants with degreasers. Remove dirt, dust and materials that interfere with the proper and effective application of the penetrating sealer. Prepare the surfaces of the substrate to a condition acceptable to the Engineer and Owner.
- B. Check the compatibility of materials used with the penetrating sealer.

3.02 APPLICATION

- A. Products applied as supplied by the manufacturer without dilution or alteration, unless noted in the manufacturer's data sheet.
- B. Apply with low pressure (15 psi) airless spray equipment with a fan spray coarse nozzle, flooding the surface to obtain uniform coverage unless otherwise recommended by the manufacturer.
- C. Apply at a rate specified by manufacturer after field tests.
- D. Apply at temperature and weather conditions recommended by the manufacturer or as written in this specification.
- E. Follow manufacturer's recommendations concerning protection of glass, metal and other non-porous substrates. Clean surfaces which are contaminated by the water repellent.
- F. Follow manufacturer's recommendation concerning protection of plants, grass and other vegetation. Replace plants, grass or vegetation damaged by the water repellent.
- G. Apply water repellent by brush only at locations where potential for overspray to affect adjacent materials and where not applicable for spray application.
- H. Start application at bottom of wall and work up surface with flood coat that has a 6 to 8 inch rundown from the spray pattern.

END OF SECTION

SECTION 07 65 00

THROUGH WALL FLASHING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Replacement of through wall flashing where indicated in Contract Drawings.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections, apply to this Section:
 - 1. Section 04 05 00 - Mortar and Grout
 - 2. Section 04 20 00 - Unit Masonry

1.03 REFERENCE STANDARDS

- A. ASTM B32 - Standard Specification for Solder Metal; 2020.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- C. ASTM D779 - Standard Test Method for Determining the Water Vapor Resistance of Sheet Materials in Contact with Liquid Water by the Dry Indicator Method; 2016.
- D. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- E. ASTM F1249 - Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor; 2020.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Manufacturer's Instructions: Latest edition of the Manufacturer's current material specifications and installation instructions.
- C. Mock-up: Provide 4 foot long section of each through wall flashing configuration with a joint and end dam shown for each mock-up.

1.05 QUALITY ASSURANCE

- A. Engage an experienced restoration firm to perform work having completed similar work in material, design, and extent to that indicated for this Project with a record of successful in-service performance.
 - 1. Field Supervision: Maintain experienced full-time supervisors on Project site during work. Do not change supervisors during Project except for causes beyond the control of restoration specialist firm.
 - 2. Restoration Worker Qualifications: Experienced and specialize in restoration work of types of work specified.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in their original sealed containers bearing manufacturer's name and identification of product.

1.07 PROJECT/SITE CONDITIONS

- A. Maintain ambient and surface temperatures above 40°F during application.
- B. Provide protection of surrounding areas and adjacent surfaces from application of materials.

PART 2 PRODUCTS

2.01 THROUGH WALL FLASHING COMPONENTS

- A. Stainless Steel: 26-gauge, Type 304 as tested in accordance with ASTM A 167.
 - 1. Drip Edge
- B. Flexible Flashing: 40-mil nominal, self-sealing, self-adhering, composite Flexible Flashing consisting of rubberized asphalt bonded to a polyethylene film.
 - 1. Meets AAMA 711
 - 2. Water Vapor Permeance: <.05 perms; ASTM F1249, ASTM E96/E96M (A).
 - 3. Water Resistance: 200 hours; ASTM D779.
- C. Mastic: Rubberized asphalt mastic provided and approved by Flexible Flashing Manufacturer.
- D. Primer: Provided and approved by Flexible Flashing Manufacturer.
- E. Termination Bar:
 - 1. Lipped bar with 45 degree angled lip to receive sealant
 - 2. 1-inch wide by 14 ga., AA 6063-T6 Aluminum
 - 3. Pre-drilled, oversized or slotted holes 8 inches on center maximum.

2.02 FASTENERS

- A. Screws: #12 stainless steel hex or pan head screws with length as to penetrate substrate a minimum of 1-1/2 inch.

- B. Concrete and Masonry Anchors: 1/4 inch diameter metal-based expansion anchor with stainless steel pin of length as required to penetrate substrate a minimum of 1-1/2 inch.
- C. Washers: Stainless steel with neoprene gasket backing; 9/16 inch diameter for use with #12 screws and 5/8 inch diameter for use with 1/4 inch diameter concrete and masonry anchors.
- D. Rivets: #44 stainless steel rivets with stainless steel mandrel with factory painted head to match adjacent sheet metal. Length of rivet to properly fasten particular sheet metal components.

2.03 RELATED MATERIALS

- A. Polyurethane Sealant: One-component elastomeric gun grade polyurethane sealant conforming to ASTM C920, Type S, Grade NS, Class 25, and use NT, M, A, G, or O as required by substrate conditions. Color to match adjacent materials.
- B. Sealant Tape: Minimum 1/2 inch wide non-skinning butyl sealant tape.
- C. Solder: 20-80 tin-lead alloy conforming to ASTM B32.
- D. Flux: Muriatic acid killed with zinc or an accepted brand of commercial soldering flux designed for use with 20-80 solder.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

3.02 PREPARATION

- A. Remove veneer clean and straight without damaged or spalling veneer to install through wall flashing components. Replace damaged work. Properly support wall and veneer during replacement of through wall flashing.
- B. Remove existing flashing components as necessary.
- C. Prepare back-up wall surfaces so they are smooth and free from projections that could puncture flashing.

3.03 INSTALLATION

- A. General
 1. Lock and seal sheet metal joints as indicated in Contract Drawings.
 2. Solder end dams, inside corners and outside corners. Provide inside and outside corners to consist of soldered, fabricated sheet metal extending 18" each direction from corner.
 3. Provide for thermal movement (expansion and contraction) of sheet metal.
 4. Where dissimilar metals contact, prevent galvanic action by means of heavy coat of asphalt paint.

5. Prime metal surfaces (top and bottom) to receive asphalt/bituminous materials. Allow primer to dry thoroughly before application of asphalt/bituminous materials.
 6. Hem exposed edges of sheet metal for strength and appearance.
 7. Fit sheet metal closely and neatly.
- B. Installation:
1. Fabricate drip edge as shown in detail drawings and install with horizontal flange set in two beads of polyurethane sealant or thin bed of grout.
 - a. Lap adjacent sheet metal sections of drip edge a minimum of 4 inches and apply two beads of butyl sealant in the lapped section. Provide 6 inch wide cover strip of flexible flashing over lapped area.
 - b. At control/expansion joints; leave 1/4 inch space between adjacent sheet metal sections and provide 8 inch wide cover plate centered over joint and set in two beads of sealant on each side of joint.
 - c. Solder inside corners and outside corners. Provide inside and outside corners to consist of soldered, fabricated sheet metal extending 18" each direction from corner.
 - d. Turn horizontal flange up at terminations to form end dam.
 2. Apply asphalt primer to drip edge and CMU back-up wall. Do not apply primer to gypsum wall sheathing.
 3. Follow flexible flashing manufacturer's guidelines for installation of flexible flashing.
 4. Adhere flexible flashing to back-up wall substrate and drip edge. Extend flexible flashing up back-up wall substrate a minimum of 8 inches. If a mortar is utilized, extend flexible flashing up back-up wall substrate a minimum of 12 inches as required by the manufacturer.
 5. At terminations wrap flexible flashing to form end dam.
 6. Seal top edge of flexible flashing with termination mastic.
 7. Lap flexible flashing sheets a minimum of 3 inch.
 8. Apply mastic at seams and laps of flexible flashing material.
 9. Terminate top edge of flexible flashing with termination bar at 8 inches on center maximum or into each metal stud.
 10. Seal top edge of termination bar with sealant or mastic approved by flexible flashing manufacturer.
 11. Before covering flashing, seal penetrations in flashing with mastic, sealant, or tape as recommended by flashing manufacturer.
- C. Refer to Section 04 20 00 - Unit Masonry for replacement of veneer materials.

END OF SECTION

SECTION 07 92 00

ELASTOMERIC JOINT SEALANTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Replace joint sealants to include removal of materials, preparation of joints, priming of substrate as determined from sample adhesion tests, installation of backer-rod or tape to prevent 3-sided adhesion, and providing specified sealant properly tooled to ensure adhesion.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections, apply to this Section:
 - 1. Section 04 05 00 - Mortar and Grout
 - 2. Section 04 20 00 - Unit Masonry

1.03 REFERENCE STANDARDS

- A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018.
- B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023).
- C. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Manufacturer's Instructions: Latest edition of the Manufacturer's current material specifications and installation instructions.
- C. Samples for Verification: Provide Manufacturer's standard color selection for Owner's approval. Provide physical sample of preselected color(s) for final approval of color by Owner before installation.
- D. Compatibility and Adhesion Test Reports: Submit Manufacturer's letters indicating substrate samples have been tested for adhesion and compatibility. Include surface preparation methods along with primer requirements for the substrates tested.

- E. Non-Stain Testing: Provide certification for silicone joint sealants indicating completion of stain testing in compliance with ASTM C1248 for non-fluid-staining results on porous surfaces, concrete, granite and marble.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Minimum of 5 years successful experience in building envelope restoration with the application of elastomeric joint sealants on projects of similar type and nature.
 - 2. Approved by Sealant Manufacturer.
- B. Manufacturer's Field Services: During construction and until substantial completion, perform monthly quality assurance site visits by manufacturer's technical representative to ensure materials are being properly installed and as required to obtain the specified warranty.
 - 1. Manufacturer present during the field mock-up phase and testing.
 - 2. Coordinate site visits with Engineer. Submit reports of findings within one week of inspection. Payment applications will be rejected until applicable reports are received.
 - 3. Inspections to be performed by an employee of the selected manufacturer that is assigned full time to their technical services department. Sales personnel are not acceptable for this function.
 - 4. Manufacturer's final inspections performed only with REI personnel in attendance. A minimum of seven days' written notice is required. Repeat manufacturer's final inspection conducted without REI personnel in attendance at no additional cost to the Owner.
- C. Source Limitations: Obtain joint sealants, related structural glazing sealant or related elastomeric coatings and joint sealant primers through one source from a single Manufacturer.
- D. Field Mock-up:
 - 1. Before caulking work begins, prepare for caulking three 3 joints, each approximately 48 inches long, in each type material to be caulked. Treat joints as hereinafter specified as to preparation. After the joint preparation has been observed by the Engineer, Sealant Manufacturer, and the Contractor, caulk the joints and allow to reach final cure.
 - 2. After final cure, obtain samples and test for appropriateness of preparation, installation and for adhesion of sealant to substrate. Test completed by manufacturer.
 - 3. After the manufacturer's representative has observed the on-site job preparation and sealant application for the test areas, and after the material has been tested for appropriateness of use and field condition compliance with the specifications, present to the Engineer a certification that the sealant material is in compliance with the specifications and that field conditions tests confirm that the sealant material is appropriate and suitable for the intended use. Completed by manufacturer.
 - 4. Do not begin work on the project until approved field tests have been accepted by the Engineer.

- E. During the progress of the work, after material has received final cure, hand pull test in accordance with procedures as published by SWRI, perform in the presence of the Engineer. Perform tests at random times in random areas selected by the Engineer. Repair test areas at no additional charge to the owner.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials in the manufacturer's original sealed and labeled containers and cartons.
- B. Storage. Store materials out of direct exposure to the elements, located above standing water at least 4 inches above ground level. Place non-sweating tarpaulins to prevent moisture contamination.
- C. Sealants are heat and moisture sensitive; protect from excessive heat exposure and moisture exposure.
- D. Do not allow sealants to be exposed to prolonged freezing temperatures.
- E. Shelf Life: Do not use products over 9 months old unless Manufacturer's published literature allow. Document product self-life information, and check expiration date before use.
- F. Handling: Handle material to prevent exposure to moisture. During cold temperatures (less than 40°F) store containers at room temperature for 24 hours.

1.07 PROJECT CONDITIONS

- A. Do not apply sealant during precipitation or start in the event there is a probability of precipitation during the application. Forecasted conditions to be dry for no less than 24 hours after application
- B. Ensure sealant Manufacturer's published requirements are followed, including the following general limitations for sealants:
 - 1. Do not apply polyurethane sealants to uncured silicone sealants, or install adjacent to uncured silicone.
 - 2. Do not allow uncured polyurethane sealant to come in contact with alcohol-based sealants, butyl sealants, acrylic sealants or other incompatible materials.
 - 3. Do not allow uncured polyurethane sealant to come in contact with oil-based caulking/sealants, oil, asphalt, polysulfides, or fillers impregnated with oil, asphalt or tar.
 - 4. Do not install sealant on damp substrates.
 - 5. Do not install where sealant where continually immersed in water.
 - 6. Do not apply sealant to "green" treated lumber.
 - 7. Prime masonry, stainless steel, copper, galvanized steel and pre-finished metal with sealant Manufacturer's approved primer. Refer to specified primers.
 - 8. Follow Manufacturer's published precautions.
- C. Do not install more sealant than can cure for 24 hours before precipitation.

1.08 WARRANTY

- A. Material Manufacturer's Warranty:
 - 1. Guarantee material to meet or to exceed the properties specified within this section of the specifications and agree to replace products found defective.
 - 2. Urethane Sealant: 5 year period beginning at date of substantial completion of the work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Polyurethane Sealant Components:
 - 1. Polyurethane Sealant: Two-component, premium grade, polyurethane-based elastomeric material for horizontal, vertical, and overhead joints and cure under the influence of atmospheric moisture to form an elastomeric substance meeting Federal Specification TT-S-00227E, Type II, Class A and ASTM C920, Type M, Grade NS, Class 25, Use NT, M, G, A or O. Color chosen by Owner from manufacturer's standard color chart and approved by Owner in advance of application. Acceptable Manufacturers include:
 - a. Sika Sikaflex 2C NS
 - b. BASF Masterseal NP 2
 - c. Tremco Dymonic 240
 - d. Pecora DynaTrol II
 - 2. Primer: Primer manufactured and recommended by Sealant Manufacturer. Consult sealant Manufacturer's published literature for specific substrate and primer types.
 - 3. Backer Rod: Closed-cell backer-rod or soft backer-rod as recommended by sealant Manufacturer; closed cell sized 1/8 inch larger than joint for compression, and soft backer-rod sized 25% greater than joint for tight fitting compression in the joint.
 - 4. Bond-breaker Tape: Polyethylene strip or tape, as recommended by or supplied by the sealant Manufacturer to prevent 3-sided bond in joints.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Site Verification of Conditions: Inspect joints indicated for restoration and verify joint substrate conditions are acceptable for installation in accordance with sealant Manufacturer's instructions. Correct unsatisfactory conditions before installing sealants.
 - 1. Determine acceptable removal techniques for contaminants, dust, dirt, grease, oils, curing compounds, form release agents, laitance and waterproofing film or over-spray coatings which are harmful to sealant performance.
 - 2. Surface Defects and Repairs: Identify contaminants in substrates that are harmful to system performance. Allow substrates or repaired surface defects to cure per manufacturer's recommendations.
- B. Commencement of work signifies acceptance of substrate. Correct defects in work resulting from accepted substrates at no additional expense to the Owner.

3.02 PREPARATION

- A. Protect adjacent work areas and finished surfaces from damage during joint sealant installation.
- B. Prior to installation, remove joint sealant materials and clean substrates of substances that impair the bond of joint sealants. Remove joint sealant residue.
- C. Remove rusting or scaling surfaces using abrasive cleaning methods as recommended by joint sealant Manufacturer prior to joint sealant installation.
- D. Remove and neutralize efflorescence, mold, mildew and algae prior to joint sealant installation.
- E. Clean and prepare joint surfaces before installing joint sealants. Clean and dry surfaces of frost and dust.
 - 1. Clean porous joint surfaces by using heavy-duty brushing, light abrasive, mechanical abrading or combination of these methods to produce a clean, sound surface for optimum bond with joint sealants per manufacturer's recommendations. Provide dry, dust-free and cleaned substrate for optimum results.
 - 2. Clean non-porous surfaces using the two-cloth solvent wipe method as referenced in ASTM C1193 and outlined by joint sealant manufacturer's instruction. IPA (isopropyl alcohol) is not a degreasing solvent; utilize for non-porous joint cleaning and preparation. Use xylene, toluene or MEK for degreasing solvent and general cleaning of non-porous surfaces. Follow applicable precautions associated with solvents.
- F. Coordinate cleaning, priming and installation to avoid contamination of wet, freshly coated or on adjacent finished surfaces.
- G. Prepare finish-coated surfaces in accordance with joint sealant Manufacturer's specific recommendations.

3.03 INSTALLATION

- A. Comply with joint sealant Manufacturer's written installation instructions for products, primers and applications.
- B. Mix two components per manufacturer's recommendations.
- C. Apply joint sealants for continuous waterproof sealant joint protection. Lap vertical joints over horizontal joints as recommended by sealant Manufacturer. Comply with installation recommendations in ASTM C1193 for use of joint sealants as applicable to each specific sealant installation.
- D. Install sealant primers when recommended by sealant Manufacturer and demonstrated at pre-construction tests after joint surface preparation has been completed and when surfaces are verified as clean and dry.
 - 1. Apply sealant Manufacturer's primer per Manufacturer's instructions.

2. Follow Manufacturer's specific safety, health and environmental recommendations per most recent Material Safety Data Sheets, technical bulletins and instructions. Handle solvents in compliance with applicable EPA, OSHA and VOC requirements regarding health/safety standards.
 3. Allow primer installation to dry or cure prior to installation of backing or joint sealants.
- E. Install joint sealant backings of type and size required.
1. Avoid gaps, twisting, stretching or puncturing joint sealant backing materials. Place backing materials into joint opening using a gauge or roller-tool designed to provide the appropriate uniform depth allowing optimum sealant profile, sealant coverage and long-term joint sealant performance.
 2. Install bond-breaker tape behind sealant joints where sealant backings are not feasible and to avoid 3-sided adhesion at backside of sealant joint.
 3. Use masking tape to protect adjacent finished surfaces prior to joint sealant installation.
- F. Install joint sealants in accordance with joint sealant Manufacturer's instructions using proven techniques that comply with the following and in proper sequence with installation of joint backings.
1. Using proper joint sealant dispensing equipment, place sealants by pushing sealant beads into opening to wet-out joint sealant substrates. Fill sealant joint opening to proper configuration.
 2. Install, providing uniform cross-sectional shapes and depths in relation to joint width for optimum sealant movement capability per joint sealant manufacturer's instructions.
- G. Tool non-sag joint sealant installations. After placing fresh sealants and before skinning or curing begins, tool sealants using metal spatulas designed for this purpose in accordance with sealant Manufacturer's recommendation. Tool to form a smooth, uniform sealant finish, eliminating air pockets and ensuring good contact for optimum joint sealant adhesion within each side of the joint opening.
1. Provide concave joint configuration as indicated per figure 8-A in ASTM C1193 unless otherwise indicated for the project. Wet tooling of joint sealants is not permitted.
 2. Remove excess sealant from surfaces adjacent to joint openings using metal spatula, promptly cleaning sealant residue from adjacent finished surfaces. Remove masking after joint sealant is installed.
- H. Allow joint sealants to cure for a minimum of 7 days before adhesion testing is performed as recommended by joint sealant Manufacturer for field-testing.
- I. Match approved sealant mock-up for color, finish and overall aesthetics. Remove, refinish or re-install work not in compliance with the Contract Documents.

3.04 FIELD QUALITY CONTROL

- A. Where required above, ensure Manufacturer's field service is provided consisting of site visits at the start of the project, during application, and upon completion of the project.
- B. Field-Adhesion Testing: keep daily log of sealant installation recording self-performed field-adhesion testing at each elevation of the project and as follows:

1. Document and perform field-adhesion testing in accordance with Manufacturer's recommended field-adhesion testing to qualify for joint sealant Manufacturer's Warranty.
 2. Perform 5 field-adhesion tests for the first 1000 lineal feet and one test in each 1000 lineal feet of sealant joint length thereafter. When the sealant is used to weatherseal between two (2) dissimilar substrates, individually test the sealant adhesion to each side of the joint.
 - a. Perform 3 additional tests for each failed test.
 3. Field test joint sealants in accordance with Method A, Field-Applied Sealant Joint Hand-Pull Tab, in Appendix X-1 in ASTM C1193 and in compliance with Manufacturer's specific recommendations.
 4. In compliance with joint sealant manufacturer, joint sealants tested and not indicating adhesive failure within the substrates are considered satisfactory results. For joint sealants that fail to adhere to the substrate, clean, re-install and then re-test until satisfactory results are obtained.
- C. The Engineer and Owner reserves the right to complete recommended testing required by the Manufacturer at completion of work to ensure warranty requirements and contract compliance are met.

3.05 PROTECTION

- A. Protect installed sealants during and after final curing from damage resulting during construction. Replace damaged joint sealants.

3.06 CLEANING

- A. Clean off/remove excess sealant or sealant residue adjacent to joint sealant installations as the work progresses by methods approved by joint sealant Manufacturer. Do not damage adjacent surfaces with harmful removal techniques and protect finished surfaces beyond those that have been masked.
- B. Remove temporary coverings and masking protection from adjacent work areas upon completion. Remove construction debris from the project site on a planned and regular basis.

END OF SECTION

SECTION 31 00 00

EARTHWORK

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Excavate and/or backfill to accommodate the installation of flexible or rigid pavement system.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections apply to this Section:
 - 1. Section 32 05 23 - Cement and Concrete for Exterior Improvements

1.03 REFERENCE STANDARDS

- A. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012 (Reapproved 2021).
- B. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- C. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)); 2012 (Reapproved 2021).
- D. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2017, with Editorial Revision (2020).
- F. ASTM D2940/D2940M - Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports; 2020.
- G. ASTM D4491/D4491M - Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 2022.
- H. ASTM D4533/D4533M - Standard Test Method for Trapezoid Tearing Strength of Geotextiles; 2015 (Reapproved 2023).
- I. ASTM D4632/D4632M - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles; 2015a (Reapproved 2023).

- J. ASTM D4751 - Standard Test Methods for Determining Apparent Opening Size of a Geotextile; 2021a.
- K. ASTM D4833/D4833M - Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products; 2007 (Reapproved 2020).

1.04 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Aggregate Base Course (ABC Stone): Well graded stone measuring up to 1 ½" in size.
- C. Bedding Course: Layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations.
 - 1. Additional Excavation: Excavation below subgrade elevations as directed by Engineer. Additional excavation and replacement material paid for according to Contract provisions for changes in the Work.
 - 2. Bulk Excavation: Excavations more than 10 feet in width and pits more than 30 feet in either length or width.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, without additional compensation.
- G. Fill: Soil materials used to raise existing grades.
- H. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material exceeding 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
 - 1. Rock Excavation, Trench: Late-model, track-mounted hydraulic excavator; equivalent to Caterpillar Model N, 235D LC; measured according to SAE J-1179.
 - 2. Rock Excavation, Mass: Late-model, track-mounted loader with a hydraulically operated power ripper; equivalent to Caterpillar Model No. D-8N, Heavy Duty; measured according to SAE J-732.
 - 3. This classification does not include loose rock, concrete, or other materials that can be removed by means other than drilling and blasting, but which is chosen to remove by drilling and blasting.
- I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

- J. Subbase Course: Layer of standardized ABC Stone installed over the subgrade and prior to flexible or ridged pavement system.
- K. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill below subbase, drainage fill, or topsoil materials.
- L. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.
- M. Unsatisfactory Soils: ASTM D2487 soil classification groups MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- N. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.
- O. Uncontaminated Stone: Rock material that has not been combined with a significant amount of foreign soils.

1.05 MATERIALS OWNERSHIP

- A. Materials indicated to be stockpiled are the Owner's property.
- B. Store on site.

1.06 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Test Reports: Submit test reports indicating suitability of materials supplied from offsite.

1.07 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Owner and Engineer and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.

PART 2 PRODUCTS

2.01 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

- B. Satisfactory Soils: ASTM D2487 soil classification groups GC, SC, CL, ML, GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Backfill and Fill: Satisfactory soil materials.
- D. Subbase: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2- inch sieve and not more than 12 percent passing a No. 200 sieve.
- E. Base: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.
- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- G. Bedding: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- H. Structural Fill and Backfill: Inorganic soil with a maximum particle size of no more than 3 inches, plasticity index of 20 or less, and maximum dry density of at least 90 pounds per cubic foot when tested by the Standard Proctor Method in accordance with ASTM D698.
- I. Rip Rap: Consist of quarry run stone, field stone or granite stone and classified by size into Class 1. Vary in weight from 5 to 200 pounds. At least 30% of the total weight of the rip rap in individual pieces weighing a minimum of 60 pounds. Not more than 10% of the total weight of the rip rap in individual pieces weighing less than 50 pounds.

2.02 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6 inches wide and 4 mils thick, continuously inscribed with a description of utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
 1. Red: Electric.
 2. Yellow: Gas, oil, steam, and dangerous materials.
 3. Orange: Telephone and other communications.
 4. Blue: Water systems.
 5. Green: Sewer systems.
 6. Use warning tape type and color as directed by Utility Agencies having jurisdiction where applicable.
- B. Drainage Fabric: Nonwoven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:
 1. Grab Tensile Strength: 110 lbf; ASTM D4632/D4632M.

2. Tear Strength: 40 lbf; ASTM D4533/D4533M.
3. Puncture Resistance: 50 lbf; ASTM D4833/D4833M.
4. Water Flow Rate: 150 gpm per sq. ft.; ASTM D4491/D4491M.
5. Apparent Opening Size: No. 50; ASTM D4751.

2.03 SOURCE QUALITY CONTROL

- A. Test off-site materials used for suitability under requirements of this section.

PART 3 EXECUTION

3.01 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
- C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- D. Provide one public and one private utility locates prior to the start of work. De-energize lines within 10 feet of the work and pothole for gauging proper depth.
 1. A vacuum truck is required for potholing within 10 feet of all utility lines.
 2. Potholed utilities to remain open and protected until demolition/grading is complete.
 3. Locate utilities within 10 days of work and refresh every 30 days.
 4. Inspect markings daily for signs of wear.
 5. Make markings clearly visible for the duration of the project.
 6. Stake whiskers in gravel areas to maintain visibility.
 7. Submit illustration of marked utilities prior to the start of construction.

3.02 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.03 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.04 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.
 - 2. Stockpile surplus topsoil and allow for re-spreading deeper topsoil.

3.05 EXCAVATION

- A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, and obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
- B. Classified Excavation: Excavation to subgrade elevations classified as earth and rock. Rock excavation paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
 - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
 - 2. Rock excavation includes removal and disposal of rock.
 - a. Do not excavate rock until it has been classified and cross-sectioned by Owner's Geotechnical Representative.
- C. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
 - 2. Excavation for Underground Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended for bearing surface.

3.06 SUBGRADE

- A. Notify Engineer and Testing Agency when excavations have reached required subgrade.

- B. If Engineer or Testing Agency determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
 - 1. Additional excavation and replacement material paid for according to Contract provisions for changes in the Work.
- C. Proof roll subgrade and/or subbase with a 10 wheel loaded dump truck weighing a minimum 20 tons. Identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated or frozen subgrades. Limit vehical speed to three miles per hour.
- D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities and retest, as directed by Engineer.

3.07 STORAGE OF SOIL MATERIALS

- A. Stockpile fill and other satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.08 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for record documents.
 - 3. Inspecting and testing underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

3.09 FILL

- A. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface before placing fills.
- B. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material bonds with existing material.
- C. Place and compact fill material in layers to required elevations as follows:
 - 1. Use satisfactory soil material except where otherwise indicated.

3.10 MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content or as accepted by Engineer.
 - 1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.11 COMPACTION OF BACKFILLS AND FILLS

- A. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill materials evenly around structures to required elevations, and uniformly along the length of the structure.
- C. Compact soil to not less than the following percentages of maximum dry density according to ASTM D698:
 1. Under structures, building slabs and steps scarify and re-compact top 12 inches of existing subgrade and each layer of backfill or fill material at 98 percent. Compact other fill to 95 percent unless otherwise indicated.
 2. Under pavements, compact material to a depth of 8 inches below the finished surface of the subgrade to a density of at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T 99 as modified by the referenced DOT.
 3. Under walkways, scarify and re-compact top 6 inches below subgrade and compact each layer of backfill or fill material at 95 percent.
 4. Under lawn or unpaved areas, scarify and re-compact top 12 inches below subgrade and compact each layer of backfill or fill material at 90 percent.
 5. Compact utility trenches to 95 percent.

3.12 GRADING

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 1. Provide a smooth transition between adjacent grades.
 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 1. Lawn or Unpaved Areas: Plus or minus 1 inch when tested with a 10-foot straightedge.
 2. Walks: Plus 1/2 inch or minus 1 inch when tested with a 10-foot straightedge.
 3. Pavements: Plus 1/4 inch or minus 1/2 inch when tested with a 10-foot straightedge.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of plus 1/4 inch or minus 1/2 inch when tested with a 10-foot straightedge.

3.13 SUBBASE AND BASE COURSES

- A. Under pavements and walks, place subbase course on prepared subgrade and as follows:

1. Place base course material over subbase.
 2. Compact subbase and base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 98 percent of maximum dry density according to ASTM D698.
 3. Shape subbase and base to required crown elevations and cross-slope grades.
 4. When thickness of compacted subbase or base course is 6 inches or less, place materials in a single layer.
 5. When thickness of compacted subbase or base course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches thick or less than 3 inches thick when compacted.
- B. Pavement Shoulders: Place shoulders along edges of subbase and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry density according to ASTM D1557.

3.14 DRAINAGE COURSE

- A. Under slabs-on-grade, place drainage course on prepared subgrade and as follows:
1. Compact drainage course to required cross sections and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D698.
 2. When compacted thickness of drainage course is 6 inches or less, place materials in a single layer.
 3. When compacted thickness of drainage course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches thick or less than 3 inches thick when compacted.

3.15 RESPREADING TOPSOIL

- A. Re-spread stockpiled topsoil in planted areas. Distribute stockpiled material in a uniform thickness as follows.
1. Lawn Areas: 4 inches minimum.
 2. Planting Areas: 12 inches minimum.
- B. Adjust topsoil as required by Engineer following topsoil depth testing by Owner's testing representative.

3.16 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will employ a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design-bearing capacities. Subsequent verification and approval of other footing subgrades based on a visual comparison of subgrade with tested subgrade when accepted by Engineer.

- D. Testing agency will test compaction of soils in place according to ASTM D1556/D1556M, ASTM D2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test per 2000 sq. ft. or less of paved area or building slab, but in no case fewer than three tests.
 - 2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for each 100 feet or less of wall length, but no fewer than two tests.
 - 3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 150 feet or less of trench length, but no fewer than two tests.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; re-compact and retest until specified compaction is obtained.

3.17 PROTECTION

- A. Protecting Graded Areas: Protect graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and re-compact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION

SECTION 31 23 17

TRENCHING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Excavating trenches for utilities and utility structures.
 - 2. Bedding.
 - 3. Backfilling and compacting to subgrade elevations.
 - 4. Sheeting and Shoring.
 - 5. Dewatering.
 - 6. Compacting backfill material.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections apply to this Section:
 - 1. Section 31 00 00 - Earthwork

1.03 REFERENCE STANDARDS

- A. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop; 2022, with Errata .
- B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2012 (Reapproved 2021).
- C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
- D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)); 2012 (Reapproved 2021).
- E. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2015.
- F. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications; 2020.

1.04 DEFINITIONS

- A. Utility: Buried pipe, duct, conduit, or cable.

- B. Utility Structures: Manholes, catch basins, inlets, valve vaults, hand holes, and other utility access structures as indicated on Drawings.
- C. Trench Terminology:
 - 1. Foundation: Area under bottom of trench supporting bedding.
 - 2. Bedding: Fill placed under utility pipe.
 - 3. Haunching: Fill placed from bedding to center line of pipe.
 - 4. Initial Backfill: Fill place from center line to 6 to 12 inches above top of pipe.
 - 5. Final Backfill: Fill placed from initial backfill to subgrade.

1.05 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan. Prepare excavation protection plan under direct supervision of Professional Engineer experienced in design of this Work licensed in the applicable state.
- C. Dewatering Plan: Describe methods of dewatering and disposal of water.
- D. Samples: Submit to testing laboratory, in air-tight containers, 30-pound sample of each type of fill.
- E. Materials Source: Submit name of imported fill material suppliers.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.06 COORDINATION

- A. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities. Notify the Engineer of conflicts.

PART 2 PRODUCTS

2.01 BACKFILL MATERIALS

- A. Subsoil Fill: Clean natural soil with a plasticity index of 15 or less that is free of clay, rock, or gravel lumps larger than 2 inches in any dimension; debris; waste; frozen material; and other deleterious material that cause settlement. Suitable material excavated from the site can be used as subsoil fill under optimum moisture conditions.
- B. Granular Fill: Clean sand, slightly silty sand, or slightly clayey sand having a Unified Soil Classification of SW, SP, SP-SM or SP-SC.
- C. Foundation Stone: Clean coarse aggregate conforming to a state standard for bedding.
- D. Bedding and Haunching Material:
 - 1. Rigid Pipe: Granular Fill.
 - 2. Flexible Pipe: ASTM D2321 Class I or II fill

- E. Bedding for Structures: ASTM D2321 Class I or II fill.
- F. Initial Backfill to 6 inches Minimum Above Utility:
 - 1. Rigid Pipe: Subsoil Fill.
 - 2. Flexible Pipe: ASTM D2321 Class I or II fill.
- G. Final Backfill to Subgrade:
 - 1. Under Pavement: ASTM D2321 Class I or II fill.
 - 2. Under Landscape: Subsoil Fill.

2.02 ACCESSORIES

- A. Geotextile Fabric: 6-ounce, non-woven, non-biodegradable
- B. Concrete: Portland Cement Concrete conforming to the following minimum standards:
 - 1. Compressive strength of 3,000 psi at 28 days.
 - 2. Air entrained.
 - 3. Maximum slump of 3.5-inch for vibrated concrete and 4-inch for non-vibrated concrete.

PART 3 EXECUTION

3.01 PREPARATION

- A. General: Provide safe working conditions, to prevent shifting of material, to prevent damage to structures or other work, to avoid delay to the work, in accordance with applicable safety and health regulations. Properly shore, sheet, and brace excavations which are not cut back to the proper slope and where shown. Meet the general trenching requirements of the applicable safety and health regulations for the minimum shoring, sheeting and bracing for trench excavations.
 - 1. Contractor's Responsibility: Sole responsibility for the design, methods of installation, and adequacy of the shoring, sheeting and bracing.
- B. Arrange shoring, sheeting and bracing so as not to place strain on portions of completed work until the general construction has proceeded far enough to provide ample strength.
- C. If Engineer is of the opinion that the shoring, sheeting or bracing is inadequate or unsuited for the purpose, resubmission of design calculations and working drawings may be ordered, taking into consideration the observed field conditions. Install additional shoring, sheeting and bracing as determined from calculations.
- D. Call local utility line information service indicated on Drawings not less than three working days before performing Work. If the project is located on private property, coordinate utility location with a private utility locating provider.
 - 1. Request underground utilities located and marked within and surrounding construction areas.
 - 2. Identify required lines, levels, contours, and datum locations.
- E. Protect plant life, lawns, rock outcropping, and other features remaining as portion of final landscaping.

- F. Protect benchmarks, structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- G. Maintain and protect above and below grade utilities indicated to remain.
- H. Establish temporary traffic control and detours when trenching is performed in public right-of-way. Relocate controls and reroute traffic as required during progress of Work.
- I. Staff the trenching process to meet OSHA, state, and local requirements for trenching operations. Additionally, follow Owner safety procedures as long as there is no contradiction in local state of federal requirements.

3.02 LINES AND GRADES

- A. Excavate to lines and grades indicated on Drawings.
 - 1. Owner reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.03 TRENCHING

- A. Excavate subsoil required for utilities.
- B. Remove lumped subsoil, boulders, and rock up of 1/3 cubic yard, measured by volume.
- C. Perform excavation within 48 inches of utility service in accordance with utility's requirements or as stated in Owner's more conservative requirements.
- D. Do not advance open trench more than 200 feet ahead of installed pipe.
- E. Remove water or materials that interfere with Work.
- F. Trench Width: Excavate bottom of trenches maximum 16 inches wider than outside diameter of pipe or as indicated on Drawings.
- G. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and pipe.
- H. Maintain vertical faces to an elevation 12 inches above top of pipe.
 - 1. When Project conditions permit, slope or bench side walls above this elevation.
 - 2. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this Section.
- I. Support Utilities and Structures:
 - 1. Keep trench width at top of trench to practical minimum to protect adjacent or crossing utility lines
 - 2. Support utilities crossing trench by means acceptable to utility company.
 - 3. Do not interfere with 45-degree bearing splay of foundations.
 - 4. Provide temporary support for structures above and below ground.
- J. When subsurface materials at bottom of trench are loose or soft, excavate to firm subgrade or to depth directed by Engineer.
 - 1. Cut out soft areas of subgrade not capable of compaction in place.

2. Backfill with ASTM D2321 Class I or II fill and compact to density equal to or greater than requirements for subsequent backfill material.
- K. Trim Excavation: Hand trim for bell and spigot pipe joints where required. Remove loose matter.
- L. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Engineer.
- M. Place geotextile fabric over trench foundation stone prior to placing subsequent bedding materials.

3.04 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures, and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work unless approved by Engineer.
- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to Work from settlement, water, or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.05 SURFACE WATER CONTROL

- A. Control and remove unanticipated water seepage into excavation.
- B. Provide ditches, berms, and other devices to divert and drain surface water from excavation area as specified.
- C. Divert surface water and seepage water within excavation areas into sumps or settling basins prior to pumping water into drainage channels and storm drains.

3.06 DEWATERING

- A. Design and provide dewatering system to provide dry and stable subgrade.
- B. Operate dewatering system continuously until backfill is minimum 2 feet above normal ground water table elevation.
- C. When dewatering system cannot control water within excavation, notify Engineer and stop excavation work.
 1. Supplement or modify dewatering system and provide other remedial measures to control water within excavation.
 2. Demonstrate dewatering system operation complies with performance requirements before resuming excavation operations.

- D. Modify dewatering systems when operation causes or threatens to cause damage to construction, existing site improvements, adjacent property, or adjacent water wells.
- E. Discharge ground water and seepage water within excavation areas through filter bags or into settling basins prior to pumping water into drainage channels and storm drains.
- F. Remove dewatering and surface water control systems after dewatering operations are discontinued.

3.07 BEDDING, HAUNCHING, AND INITIAL BACKFILL

- A. Place bedding the width of trench to the depth indicated on Drawings and compact to 95 percent maximum density. Excavate for pipe bells.
- B. Install utility pipe and conduit in accordance with the respective utility section.
- C. Support pipe uniformly along length of pipe.
- D. Carefully place haunching material to center of pipe, rod and tamp material to fill voids and provide uniform support of pipe haunches. Compact to 90 percent maximum density.
- E. Carefully place initial backfill to 6 inches above top of pipe or to depth indicated on Drawings. Compact to 95 percent maximum density.

3.08 FINAL BACKFILLING TO SUBGRADE

- A. Backfill trenches to contours and elevations with unfrozen fill materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place fill material in continuous layers and compact in accordance with schedule at end of this Section.
- D. Employ placement method that does not disturb or damage utilities in trench or foundation perimeter drainage.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Do not leave more than 50 feet of trench open at end of working day.
- G. Protect open trench to prevent danger to the public.

3.09 DISPOSAL OF EXCESS MATERIAL

- A. Dispose of excess material offsite and legally.
- B. Furnish Engineer with certificate of disposal site or agreement from private property owner.

3.10 TOLERANCES

- A. Top Surface of Backfilling: plus or minus 1 inch from required elevations.

3.11 FIELD QUALITY CONTROL

- A. Perform laboratory material tests in accordance with ASTM D698, ASTM D1557 or AASHTO T 180.
- B. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D1556/D1556M, ASTM D2167, or ASTM D2922.
 - 2. Moisture Tests: ASTM D2216, ASTM D3017.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.
- D. Frequency of Tests: Two tests per lift per 1000 feet of trench. No less than one test per lift between structures.

3.12 PROTECTION OF FINISHED WORK

- A. Reshape and re-compact fills subjected to vehicular traffic during construction.

3.13 SCHEDULE OF COMPACTION

- A. Under Pavement and Slabs:
 - 1. Granular Fill in maximum 8-inch loose lifts.
 - 2. Compact to minimum 95 percent maximum density except the top 12 inches.
 - 3. Compact top 12 inches to minimum 98 percent maximum density.
- B. Under Landscape Areas:
 - 1. Subsoil Fill in maximum 8-inch loose lifts.
 - 2. Compact to minimum 90 percent maximum density.
- C. In Unstable or Unsuitable Trench Foundation Areas:
 - 1. Foundation Stone in maximum 12-inch loose lifts.
 - 2. Compact to 98 percent maximum density.

END OF SECTION

SECTION 32 05 23

CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Provide exterior concrete system for:
 - a. Sidewalks.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and the following Specification Sections, apply to this Section:
 - 1. Section 31 00 00 - Earthwork

1.03 DESCRIPTION

- A. Exterior concrete constructed upon the prepared subgrade or substrate and in conformance with the lines, grades, thickness, and cross sections shown on the Drawings meeting the following requirements:
 - 1. Type I concrete
 - 2. Do not exceed a water cement ratio of 0.35
 - 3. Minimum system thickness of 4 inches
 - 4. Minimum slope of 1/8 inch per foot, where the substrate elevation allows for clearance of stationary structures.
 - 5. Slump between 1 and 3 inches
 - 6. Minimum 28-day compressive strength of 4,000 psi

1.04 REFERENCE STANDARDS

- A. ACI PRC-211.1 - Selecting Proportions for Normal-Density and High Density-Concrete - Guide; 2022.
- B. ACI PRC-305 - Guide to Hot Weather Concreting; 2020.
- C. ACI PRC-306 - Guide to Cold Weather Concreting; 2016.
- D. ACI PRC-347 - Guide to Formwork for Concrete; 2014 (Reapproved 2021).
- E. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2024.
- F. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2023.

- G. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2024.
- H. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.
- I. ASTM C150/C150M - Standard Specification for Portland Cement; 2022.
- J. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2020.
- K. ASTM C192/C192M - Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory; 2019.
- L. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method; 2009.
- M. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- N. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2019, with Editorial Revision (2022).
- O. ASTM C615/C615M - Standard Specification for Granite Dimension Stone; 2023.
- P. ASTM C618 - Standard Specification for Coal Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2023, with Editorial Revision.
- Q. ASTM C1064/C1064M - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete; 2017.
- R. ASTM C1116/C1116M - Standard Specification for Fiber-Reinforced Concrete; 2023.
- S. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types); 2023.

1.05 SUBMITTALS

- A. Product Data: Manufacturer's Product Data Sheets for materials specified certifying material complies with specified requirements.
- B. Manufacturer's Instructions: Latest edition of the Manufacturer's current material specifications and installation instructions.
- C. Product Test Reports:
 - 1. Concrete Mix Design.
 - 2. Mix design compressive strength per ASTM C39.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver ready-mixed concrete in accordance with ASTM C94/C94M.
 - 1. Agitating drum required for transportation.

1.07 PROJECT CONDITIONS

- A. When air temperatures of 40°F or above are predicted to occur within the first 24 hours after placement, utilize normal application procedures.
- B. When air temperatures of 32°F - 40°F are predicted to occur within the first 24 hours after placement, with acceptance from the Engineer, heat mixing water to a maximum of 120°F.
- C. Avoid cold weather placement, 35°F and falling, of concrete due to the possibility of the concrete freezing prior to final set. If cold weather installations are required, provide special considerations in accordance with manufacturer's guidelines.

PART 2 PRODUCTS

2.01 ADMIXTURE MANUFACTURER

- A. Manufacturers:
 - 1. Sika
 - 2. Engineers Approved Equivalent.

2.02 MATERIALS

- A. Portland Cement: ASTM C150/C150M, type I unless otherwise accepted.
- B. Fly Ash: ASTM C618, Class C or F if accepted.
- C. Aggregate: ASTM C33/C33M
- D. Air-Entraining Admixtures: ASTM C260/C260M
- E. Reinforcing Steel: ASTM C615/C615M, when required by drawings.
- F. Expansion Joint Filler: ASTM D1751
- G. Sheet Materials for Curing Concrete: ASTM C171
- H. Water: Potable water as defined by US Department of Health, containing no more than 250 ppm of free chloride ions or other substances that affect the set of Portland cement. Clean, fresh, and free from injurious quantities of acid, alkali, salt, oil, organic matter, or other impurities. Provide water with sufficient pressure and volume to meet the insulation application schedule.
- I. Admixtures: High Range Water Reducing Sika ViscoCrete 2100 meeting ASTM C494/C494M, Type F.
- J. Fiber Reinforcement: Sika Fiber MS 20 meeting ASTM C1116/C1116M.
- K. Concrete Forms: Wood, plywood or metal with a high strength and low pliability that can withstand the loads applied.

2.03 MIX DESIGN

- A. Mix materials in accordance with recommendations of manufacturer to yield the specified physical properties while following ASTM C94/C94M.
- B. Strength of the concrete tested prior to installment. Report the average of three-cylinder tests in accordance with ASTM C39, and made and cured in accordance with ASTM C192/C192M.
- C. Follow the guidelines set forth in ACI PRC-211.1 to determine suitable air content based on the nominal maximum aggregate size and the environmental exposure.
- D. Maintain a consistency suitable to provide a plastic mix capable of being screeded to a desirable finish.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify surfaces to receive concrete have been properly prepared for installation free of grease and oil.

3.02 PREPARATION

- A. Cover drains, clean outs, etc. before installing Portland cement concrete.
- B. Remove substances that interfere with bonding of the concrete system.
- C. Set screeds to ensure concrete is applied to the required depth and height.
- D. Protect elements surrounding the work of this Section from damage or disfiguration.

3.03 APPLICATION

- A. Provide equipment and application procedures conforming to the material manufacturer's application instructions and referenced ASTM and ACI published guidelines.
- B. Follow AACI PRC-347 requirements for the installation of formwork.
 - 1. Wet forms in hot weather applications just prior to the pour.
 - 2. Clean and coat metal forms prior to reinforcement installation with light form oil.
- C. Remove debris or hardened concrete on the inside the perimeter of the pour.
- D. Distribute concrete in a fashion that does not allow segregation inside the mix.
- E. Work concrete that has not attained its initial set or has not reached its desirable water to cement ratio for longer than one and half hours.
- F. Discharge concrete no more than 3 feet horizontally above the placement position.
- G. Place in lifts not to exceed 12 inches in depth.
- H. Placing of reinforcing steel:

- I. Set reinforcing steel (including welded wire fabric) on chair supports to maintain placement at required location of the slab.
- J. Maintain minimum 1-inch concrete cover around all reinforcing steel.
- K. Consolidate concrete by spading rodding and vibrating. Avoid applying the vibration to the form work.
- L. Install warm weather concrete in accordance with ACI PRC-305.
- M. Install cold weather concrete in accordance with ACI PRC-306.
- N. Calcium Chloride is not permitted as a set accelerating agent.
- O. Remove drain sump forms as soon as the concrete supports foot traffic. Mix and install drain sump material. Hand form drain sump transition from roof drain to surrounding concrete height.
- P. Do not use water alone to improve the workability of fresh concrete. Avoid using water to assist in finishing operations or working bleed water back into the top surface of the concrete as these practices increase the water-to-cement ratio of the top layer of concrete, which leads to future durability problems.
- Q. Slab Finishes:
 - 1. Broom finish an exterior slab, ramp and stair treads with a damp bristle brush
- R. Perform saw cutting as soon as the concrete has cured enough to handle the weight of the saw and cleanly cut a 1/8 inch wide joint 1/4 of the way in to the slab.
- S. Apply curing membrane over concrete deck surface as early as practical for protection against rapid evaporation or dry out. The preferred application method is spraying.
- T. Remove forms only after the concrete has achieved sufficient strength to carry its own weight and loads. It's recommended to leave forms in place as long as possible. Form removal time frame is the responsibility of the Contractor.
- U. Prevent traffic for 28 days or until the concrete has reached the intended design strength according to the test samples. An early release can be considered based on the samples and the Engineers acceptance.

3.04 FIELD QUALITY CONTROL

- A. A third-party field-testing agency will be hired by the Contractor to perform the tests below:
 - 1. Test Specimens/Cylinders: One set of cylinders per each placement operation per 100 cubic yards in accordance with ASTM C31/C31M.
 - 2. Temperature: Performed on the first load and when test specimens are made in accordance with ASTM C1064/C1064M.
 - 3. Air Content -Pressure Air Meter: Performed on the first load, and a random load per 30 cubic yards in accordance with ASTM C231.
 - 4. Slump: Performed on the first load, and a random load per 30 cubic yards in accordance with ASTM C143/C143M.

3.05 CLEAN-UP

- A. Clean the site free of Portland cement stains, spills, aggregate, trash and other debris.

END OF SECTION

Vendor Application

PURCHASING DIVISION

LEE COUNTY

PO Box 1968

Sanford, NC 27330

Please fill out this form and send by e-mail to jwaterhouse@leecountync.gov or fax to (919) 718-4631. Your business will be added to our new vendor list.

Check all that apply

New vendor Update to existing vendor In relation to a bid

Phone: (919)-718-4600

Fax: (919)-718-4631

Please Type or Print Legibly

Federal ID # _____ SS# _____

For Finance Use Only	Vendor #
-------------------------	----------

Vendor Name

Date

ORDER ADDRESS		PAY ADDRESS	
<u>Street</u>		<u>Street</u>	
<u>Street</u>		<u>PO Box</u>	
<u>City</u>		<u>City</u>	
<u>State</u>	<u>Zip Code</u>	<u>State</u>	<u>Zip Code</u>

CONTACT PERSON	TELEPHONE NUMBER	FAX NUMBER
----------------	------------------	------------

CONTACT PERSON E-MAIL ADDRESS	TERMS	DISCOUNT
-------------------------------	-------	----------

CONTRACTOR'S LICENSE # (if applicable)	SIGNATURE
--	-----------

This firm certifies that it is a : (if applicable)

_____ Disabled _____ Minority Business Enterprise _____ Women Business Enterprise

To qualify for MWBE status, 51% of the company must be owned and controlled by minority groups or women. For the purpose of this definition, minority group members are Black Americans, Hispanic Americans, American Indians and/or American Women. To qualify for Disabled status, 51% of the company must be owned and controlled by disabled persons.

Product(s) and/or Service(s) / Identify County Department

Please list the type of product(s) and/or service(s) that your company can provide and the county department that you have been in contact with.



DEPARTMENT OF FINANCE

Tel: (919) 718-4600
P.O. Box 1968
Sanford, NC 27331-1968

Vendor Electronic Payment Authorization Form

For your convenience and benefit, the Lee County is now processing all vendor payments electronically, rather than by check. Your payments will be deposited into the checking or savings account of your choice. In addition to having the money deposited electronically, you also will be notified of the deposit by email. This notice will provide you with all the information that would normally be on your check stub.

In order for us to complete the process of updating your information, please provide a bank verification letter or a voided check. This information is used to verify the account number that you have provided below.

In the event that you change banks, bank account numbers, or email addresses, you must notify the County with the necessary changes and include a new bank verification letter or a voided check. Failure to notify us of these changes will cause delayed payments to you. Send changes to: jwaterhouse@leecountync.gov.

Please print the following information:

- Vendor Name: _____
Vendor Address: Street: _____
City, State, ZipCode: _____
Phone Number: _____
Name of Bank: _____
Bank Routing Number: _____
Bank Account Number: _____
Checking or Savings: Checking Account Savings Account
Authorized Signature: _____
Printed Name: _____
Title: _____
Telephone number: _____

- Notification of payment
e-mail address: _____

Contact Jen Waterhouse at jwaterhouse@leecountync.gov or (919) 718-4600 ext 5504 with questions or changes to above information.

The County of Lee North Carolina

Vendor/Contractor Name: _____

**IRAN DIVESTMENT ACT CERTIFICATION
REQUIRED BY N.C.G.S. 147-86.59**

As of the date listed below, the Vendor/Contractor listed above certifies that they are not on the Iran Final Divestment List ("List") created by the North Carolina State Treasurer pursuant to N.C.G.S. 147-86.58. Contractor/Vendor shall not utilize any subcontractor that is identified on the list.

**E-VERIFY CERTIFICATION
REQUIRED BY N.C.G.S. 143-48.5 & 147-33.95(g)**

As of the date listed below, the Vendor/Contractor listed above and all Vendor/Contractor's subcontractors certify that they are in compliance with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes, including the requirement for each employer with more than 25 employees in North Carolina to verify the work authorization of its employees through the federal E-Verify system.

The undersigned hereby certifies that he/she is authorized by the entity listed above to make the foregoing statement.

Signature

Date

Printed Name

Printed Title

Lee County, North Carolina
Terms and Conditions

By acceptance of this purchase order, the vendor or contractor, (referred to as the Seller), declares that the supplies, materials, equipment, apparatus, or services will be furnished according to the following terms and conditions:

1. **QUESTIONS CONCERNING THE PURCHASE ORDER:** Contact the **Ship To Department** shown.
2. **PURCHASE ORDER NUMBER:** The purchase order number must appear on all invoices, packing slips, correspondence and bill of lading.
3. **PRICE:** If prices or terms do not agree with your quotation, you must notify the ordering **Department** immediately. All prices are quoted **F.O.B. DESTINATION** unless specifically indicated otherwise.
4. **INVOICES:** All invoices are to be mailed to the **Ship To Department**. Each purchase order must be invoiced separately. Invoices for partial shipments will be accepted and final invoices should indicate completion of order. The Purchase Order Number must be referenced on all invoices.
5. **CASH DISCOUNTS:** All cash discounts will be effective from the date of actual receipt of a correct and approved invoice by the ordering department.
6. **PAYMENT TERMS:** The County agrees to pay all approved invoices Net Thirty (30) days from the date received and approved. The County does not agree to the payment of late charges or finance charges assessed by the Seller for any reason. Invoices are payable in U.S. funds.
7. **TAXES:** Lee County is not Tax-Exempt. Prices shown on the County's purchase order may not include tax; however, all applicable taxes shall be paid by the County. Seller shall itemize taxes on the Seller's invoice. It should be noted that the County is exempt from Federal Excise Tax except as required to be paid by law.
8. **QUANTITY:** The specific quantity ordered must be delivered in full and will not be changed/increased without the Purchasing Director's written consent. Any unauthorized quantity is subject to rejection and return at Seller's expense.
9. **FREIGHT AND PACKAGING:** Price quotations shall include freight, transportation, shipping, handling and similar charges. Collect freight shipments will be refused. The Seller shall absorb any increase in rates becoming effective after the date hereof. The seller agrees to assume and pay all extra expense occurring on account of improper packaging.
10. **SERVICES PERFORMED:** All services rendered under this agreement will be performed at the Seller's own risk and the Seller expressly agrees to indemnify and hold harmless Lee County, its officers, agents, and employees from any and all liability, loss or damage that they may suffer as a result of claims, demands, actions, damages or injuries of any kind or nature whatsoever by or to any and all persons or property.
11. **APPLICABLE LAWS:** By the acceptance of this order, Seller represents that the goods covered by this order are in full compliance with all applicable local, state or federal laws and regulations and agrees to indemnify and defend Lee County against any loss, cost, liability or damage by reason of Seller's violation of any laws.
12. **CANCELLATION:** Lee County reserves the right to cancel this order, or any part thereof, at any time without penalty. Such cancellation may be based upon failure of the Seller to comply with the terms and conditions of this transaction, failure to perform the work with promptness and diligence, failure to make shipment within the time specified, or for any other reason which causes the Seller not to perform as agreed.
13. **ACCEPTANCE AND INSPECTION:** All goods shall be subject to the County's right of inspection and rejection. Risk of loss and title to all goods shall remain with the Seller until acceptance has been made by the County. If goods are rejected, they will be returned at Seller's risk for credit or replacement at the County's option and all handling and transportation expenses both ways shall be assumed by the Seller. When goods have been rejected, the County shall have the right to cancel any unshipped portion of this order. Payment for supplies shall not constitute acceptance and is without prejudice to claims that the County may have against the Seller.
14. **WARRANTY:** The Seller expressly warrants that goods covered by this order will conform to the specifications, drawings, or samples furnished by the County, be suitable for the purpose intended, and shall be free from defects in material and/or workmanship and shall be merchantable. This warranty shall survive any inspection, delivery acceptance or payment by the County. The Seller also warrants that the goods do not infringe any patent, registered trademark or copyright, and agrees to hold Lee County harmless in the event of any infringement or claim thereof. Additionally, Seller warrants that the goods are free and clear of all liens and encumbrances, and that Seller has a good and marketable title to the same.
15. **HAZARDOUS CHEMICALS:** The Seller shall ensure that each container of a hazardous chemical is labeled, tagged or marked with information required by OSHA's Hazard Communication Standard, Department of Transportation requirements, and any applicable EPA requirements.
16. **MATERIAL SAFETY DATA SHEETS (MSDS):** The Seller shall ensure that Lee County is provided an appropriate current MSDS with or prior to the initial shipment of a hazardous chemical, and with or prior to the initial shipment after the MSDS is updated.
17. **NON-DISCRIMINATION POLICY:** Lee County does not discriminate on the basis of race, color, sex, national origin, religion, age or disability.
18. **VERBAL AGREEMENT:** This purchase order, including all references and/or insertions, with the stated terms and conditions thereon shall constitute the complete agreement between the County and Seller. The terms and conditions of this order shall not be modified by any verbal understanding and shall only be binding if agreed to in writing by the County.
19. **INDEPENDENT CONTRACTOR:** It is mutually understood and agreed that the Seller is an independent contractor and not an agent of Lee County, and as such, Seller and his or her agents and employees shall not be entitled to any county employment benefits, including but not limited to vacation, sick leave insurance, worker's compensation, pension or retirement benefits.
20. **GOVERNING LAW:** This agreement shall be governed and interpreted pursuant to Laws of the State of North Carolina. Any legal actions arising from default of this contract shall be brought only in the County of Lee, State of North Carolina.
21. **E-VERIFY:** For purchase orders that include construction or services, employers and their subcontractors with 25 or more employees in North Carolina as defined in Article 2 of Chapter 64 of the NC General Statutes must comply with E-Verify requirements to contract with the County. E-Verify is a Federal program operated by the US Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hire employees pursuant to federal law.
22. **IRAN DIVESTMENT ACT CERTIFICATION:** By acceptance of this purchase order Seller certifies that: (i) Seller is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. § 147-86.58 (the "Final Divestment List"), and (ii) Seller will not utilize any subcontractor performing work under this Purchase Order which is listed on the Final Divestment List. The Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and should be updated every 180 days.

LEE COUNTY BUGGY BUILDING WATERPROOFING RESTORATION

115 CHATHAM ST.
SANFORD, NC 27330

REI PROJECT NO. R24RAL-057

DATE: 04-18-25



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3. ONLY ONE DETAIL INDICATOR MAY BE SHOWN FOR EACH TYPE OF ROOF PENETRATION. ALL OTHER SIMILAR PENETRATIONS ARE TO BE FLASHED AS REQUIRED BY THE TYPICAL DETAIL INDICATOR, UNLESS OTHERWISE NOTED.
4. NOTES ARE INTENDED TO PROVIDE TYPICAL LOCATIONS OF WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO QUANTIFY ALL LOCATIONS.
DETAIL NOTES
1. LIGHT LINES REPRESENT EXISTING CONSTRUCTION TO REMAIN AND DARK LINES REPRESENT NEW COMPONENTS TO BE PROVIDED.
ELEVATION NOTES
1. ELEVATIONS ARE PROVIDED FOR REFERENCE. ACTUAL CONDITIONS MAY VARY ON EACH BUILDING ELEVATION. CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRESENT ON EACH ELEVATION.

PROJECT NAME:

LEE COUNTY

BUGGY BUILDING
WATERPROOFING
RESTORATION

115 CHATHAM ST.
SANFORD, NC 27330

PROJECT NO.:

R24RAL-057

ISSUE:

NO.	DATE	DESCRIPTION
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CD	07-09-25	ISSUED FOR BID

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SCALE DRAWING ACCORDINGLY.

SHEET TITLE

COVER

DRAWING

G-001



A VICINITY MAP
SCALE: N.T.S.



B SITE PLAN
SCALE: N.T.S.

ABBREVIATION LIST:
AB ABANDONED
ALUM. ALUMINUM
BLDG. BUILDING
CJ CONTROL JOINT
DS DOWNSPOUT
EJ EXPANSION JOINT
EPDM ETHYLENE PROPYLENE DIENE MONOMER
EX. EXISTING
GALV. GALVANIZE
GA. GAUGE
HT. HEIGHT
MAX. MAXIMUM
MIN. MINIMUM
N.I.C. NOT IN CONTRACT
NOM. NOMINAL
N.T.S. NOT TO SCALE
O.C. ON CENTER
OF OVERFLOW
PS PRESSURE SENSITIVE
PVC POLYVINYL CHLORIDE
RPLC. REPLACEMENT
SF SQUARE FEET
S.S. STAINLESS STEEL
SIM. SIMILAR
TERM. TERMINATE/TERMINATION
TYP. TYPICAL

DRAWING INDEX:
G-001 COVER
XW101 SITE PLAN
XW102 SITE PLAN - SOUTHEAST CORNER
XW501 DETAILS

BUILDING CODE REFERENCE:
2018 NBC: BUILDING
2018 NBC: ENERGY CONSERVATION
2018 NBC: EXISTING BUILDING
2018 NBC: FIRE PREVENTION
2018 NBC: FUEL GAS
2018 NBC: MECHANICAL
2018 NBC: PLUMBING



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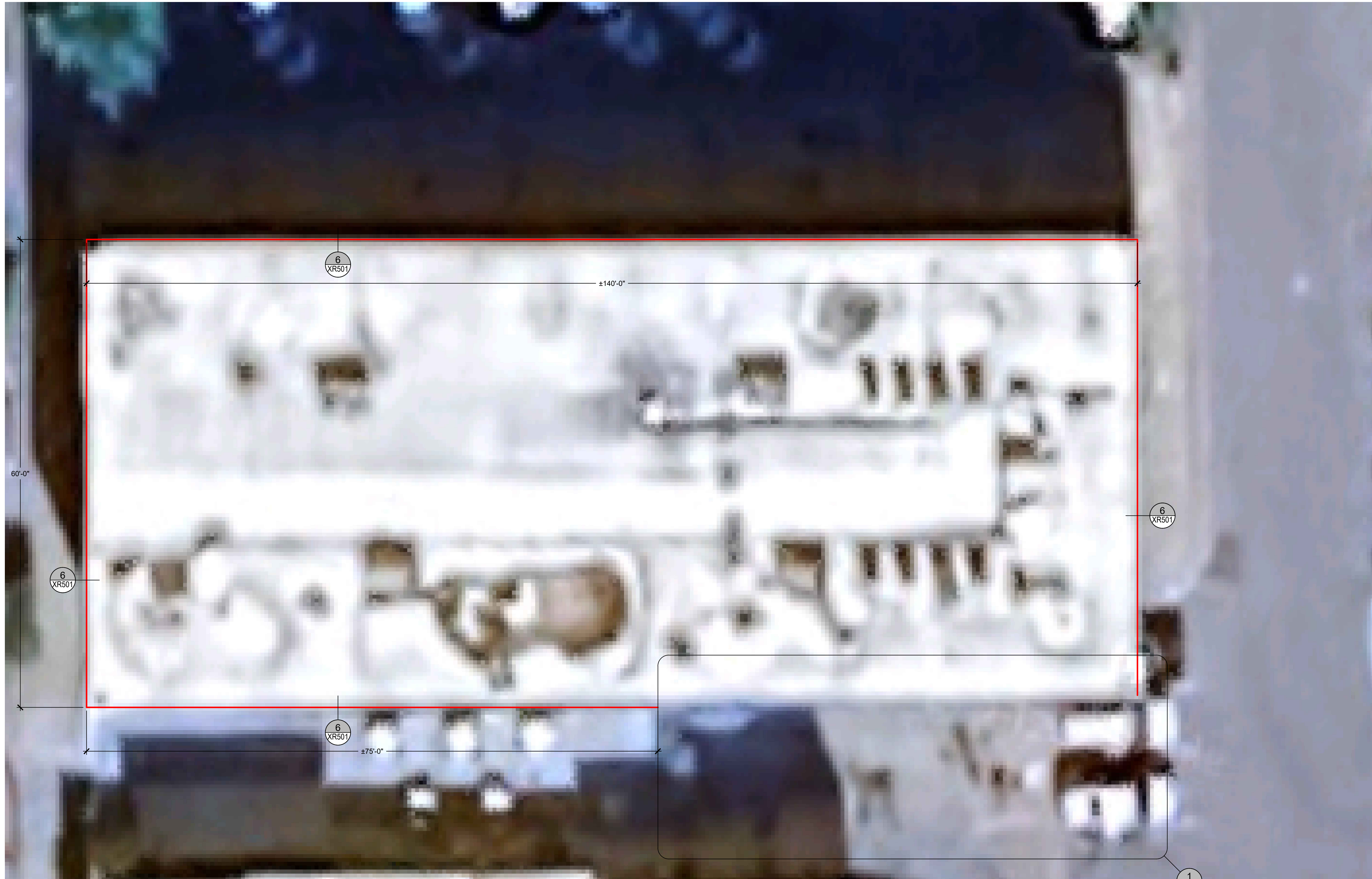
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SHEET TITLE

SITE PLAN

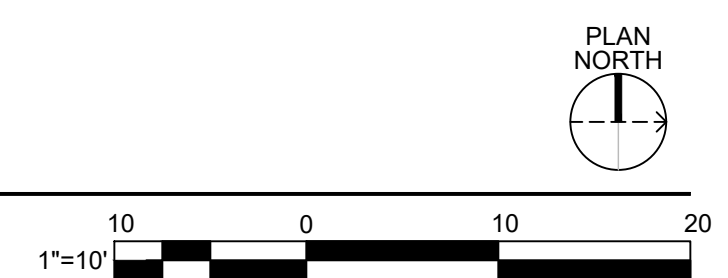
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1 SITE PLAN
SCALE: 1"=10'





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PROJECT NAME:

LEE COUNTY

BUGGY BUILDING
WATERPROOFING
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115 CHATHAM ST.
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95% CD	04-18-25	CONTRACT DOCUMENTS (95%)
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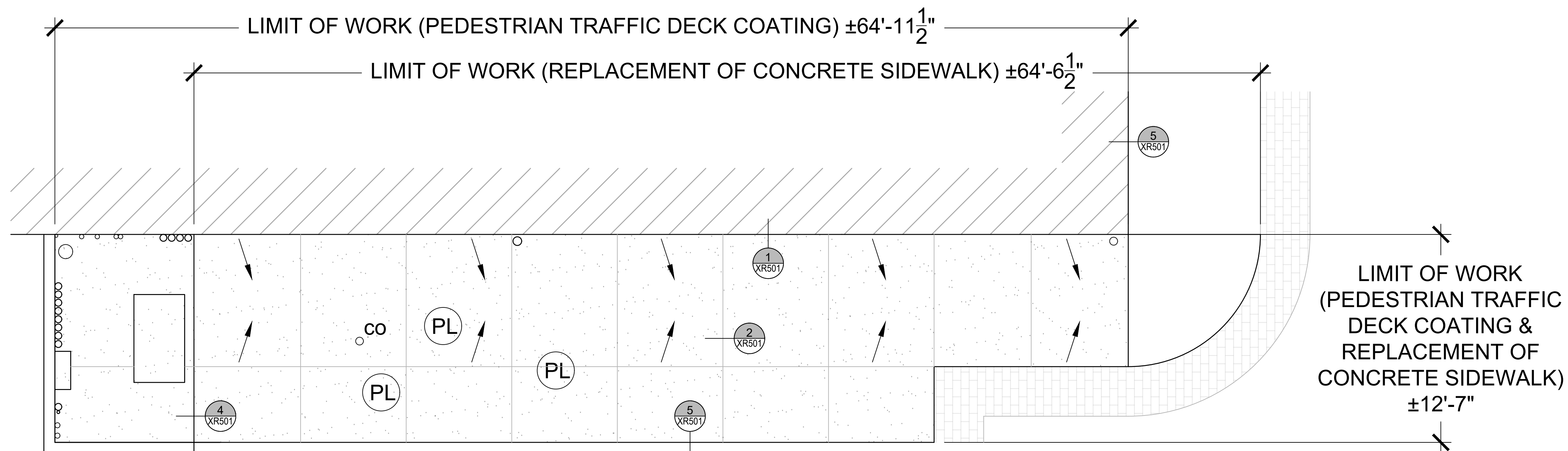
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SHEET TITLE

SITE PLAN -
SOUTHEAST
CORNER

DRAWING

XW102



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KEY

—	BUILDING WALL
—	PLANTER WALL
▨	TRAFFIC DECK COATING
▤	BRICK PAVER LOCATIONS
→	FINISHED CONCRETE SLOPE
○	PLANTER
○	PIPE PENETRATION
⊠	MECHANICAL CURB
⊠	DETAIL INDICATOR



1 SITE PLAN - SOUTHEAST CORNER

SCALE: 1/4" = 1'-0"



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SEALS:



PROJECT NAME:

LEE COUNTY

BUGGY BUILDING
WATERPROOFING
RESTORATION

115 CHATHAM ST.
SANFORD, NC 27330

PROJECT NO:

R24RAL-057

ISSUE:

NO.	DATE	DESCRIPTION
95% CD	04-18-25	CONTRACT DOCUMENTS (95%)
CD	07-09-25	ISSUED FOR BID

THIS LINE IS 1 INCH ON
THE ORIGINAL DRAWING

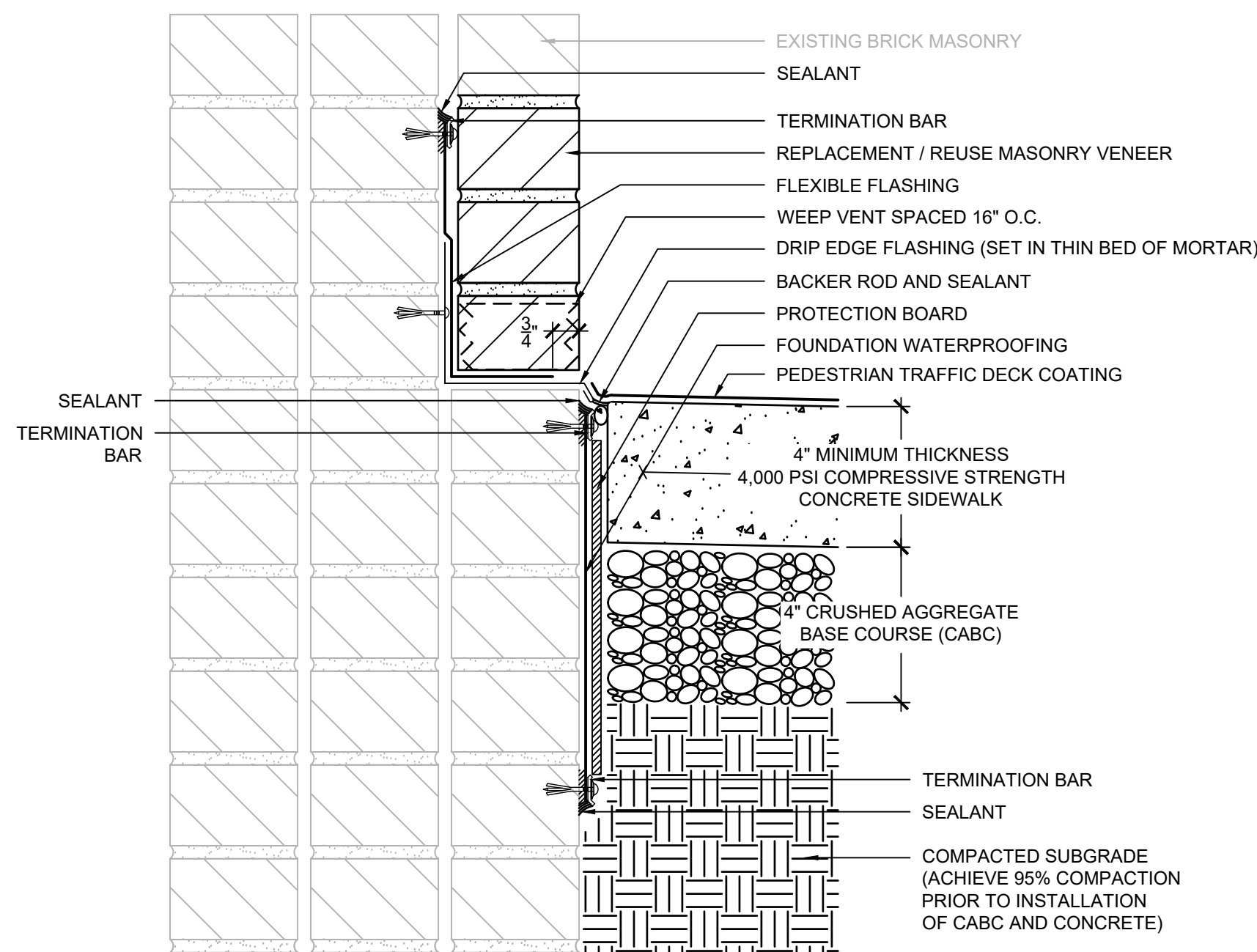
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SCALE DRAWING ACCORDINGLY.

SHEET TITLE

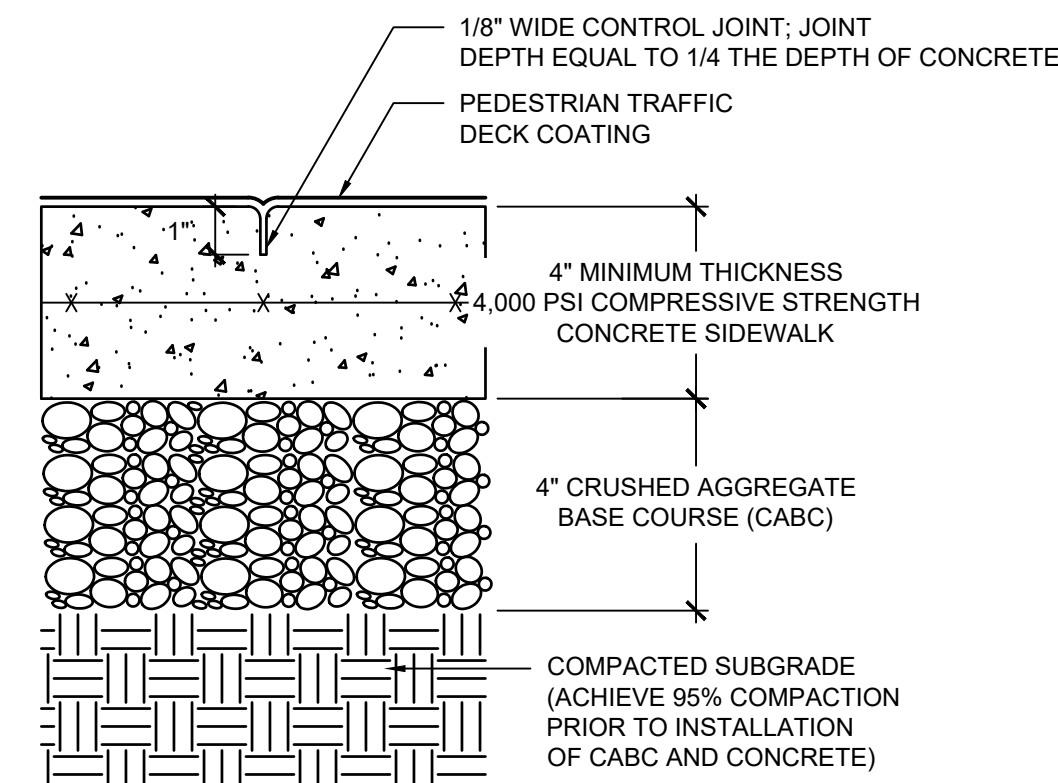
DETAILS

DRAWING

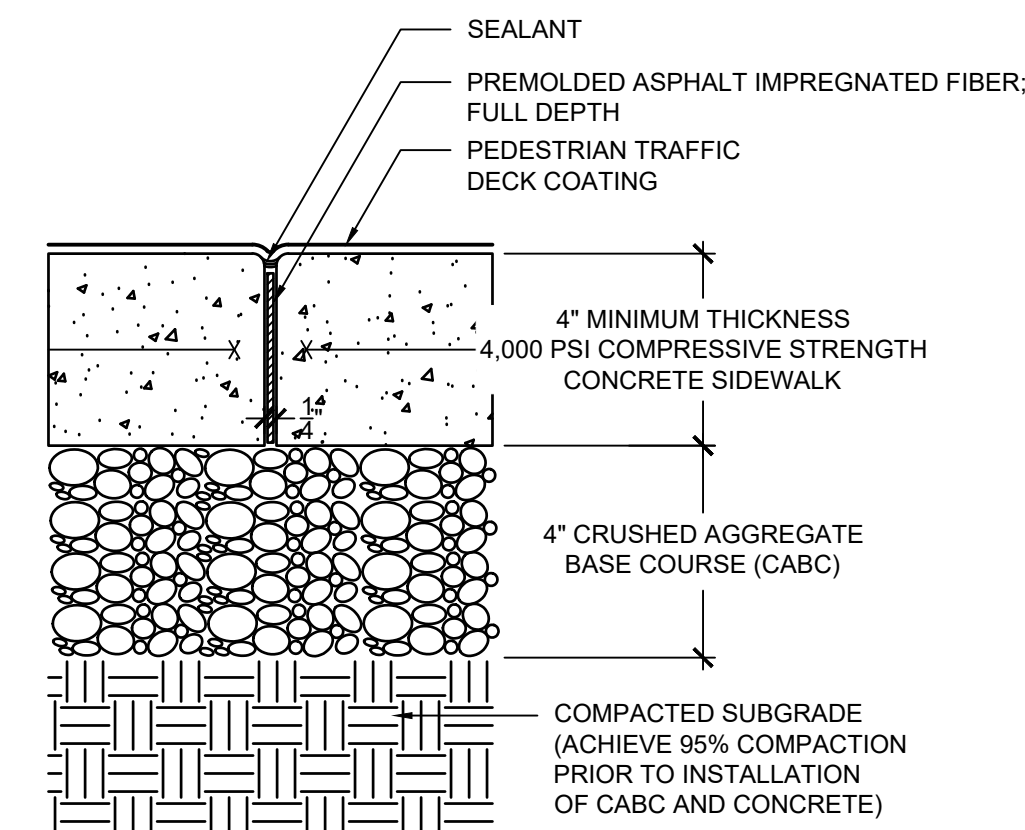
XW501



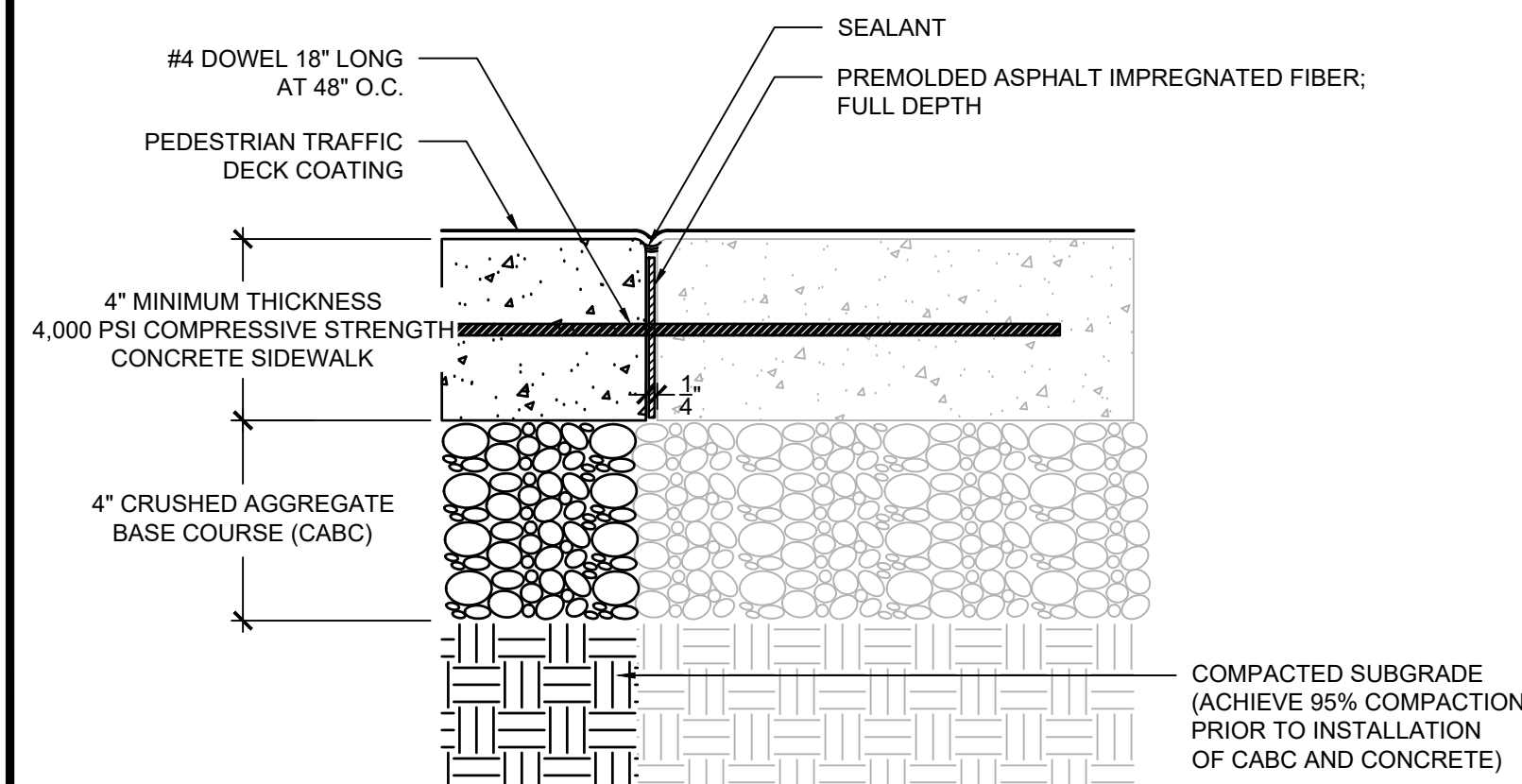
1 EXTERIOR BUILDING WALL
SCALE: 3" = 1'-0"



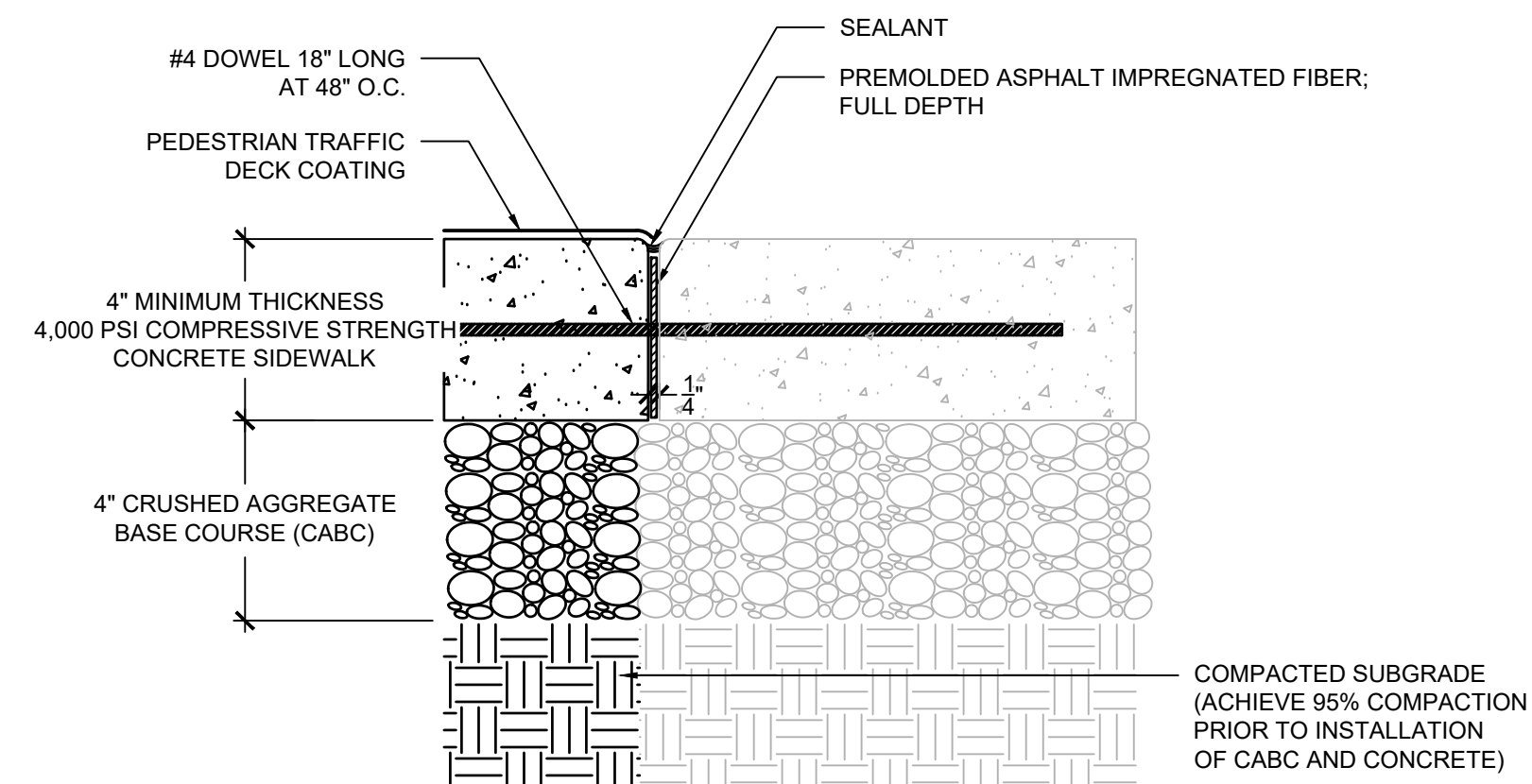
2 CONCRETE SIDEWALK - CONTROL JOINT
SCALE: 3" = 1'-0"



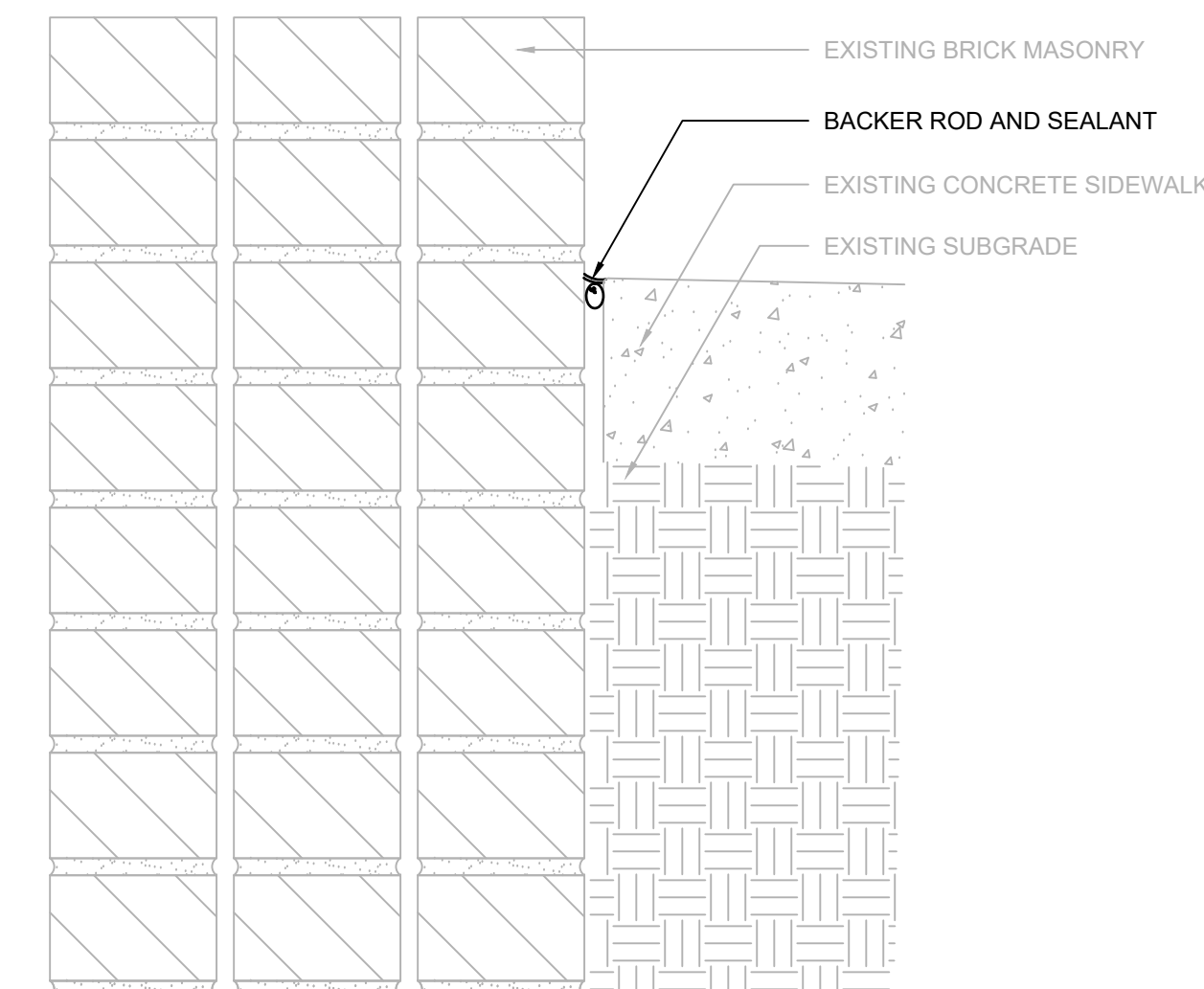
3 CONCRETE SIDEWALK - EXPANSION JOINT
SCALE: 3" = 1'-0"



4 NEW - EXISTING CONCRETE SIDEWALK
SCALE: 3" = 1'-0"



5 NEW - EXISTING CONCRETE SIDEWALK
SCALE: 3" = 1'-0"



6 EXTERIOR BUILDING WALL
SCALE: 3" = 1'-0"

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- FOR DETAILS, LIGHT LINES REPRESENT EXISTING CONSTRUCTION TO REMAIN AND DARK LINES REPRESENT NEW COMPONENTS TO BE PROVIDED.