

INDEFINITE DELIVERY OF ROOFING
CONTRACTING SERVICES (1600 HAMPTON)

University of South Carolina
COLUMBIA, SOUTH CAROLINA

STATE PROJECT NUMBER: H27-D170-CA

September 2012

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Project Number: **H27- D170-CA**

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SE-310 REQUEST FOR ADVERTISEMENT

PROJECT NAME: Indefinite Delivery of Roofing Contracting Services

PROJECT NUMBER: H27-D170-CA

PROJECT LOCATION: University of South Carolina, Columbia, SC

Contractor may be subject to performance appraisal at close of project

BID SECURITY REQUIRED? Yes No

PERFORMANCE & PAYMENT BONDS REQUIRED? Yes No

CONSTRUCTION COST RANGE: <\$250,000

DESCRIPTION OF PROJECT: To provide Indefinite Delivery of Roofing Contracting Services for all USC campuses statewide. The basis for this award will be by low bid for an actual project. The project will consist of removal of existing BUR coal tar with gravel surface; areas contain Chrysotile, an asbestos containing material. New roof assembly will be three ply asphalt BUR with granular surface cap sheet. There will be 5 contractors selected for the contract; the contractor must possess a GC license of Group 3 or greater.

A/E NAME: Floyd Abrams Company

A/E CONTACT: Floyd Abrams

A/E ADDRESS: Street/PO Box: 3111 Devine Street /PO Box 6136 (29260-6136)

City: Columbia

State: SC ZIP: 29205-

EMAIL: floydabramsco@mindspring.com

TELEPHONE: 803-343-1272

FAX: 803-343-1274

All questions & correspondence concerning this Invitation shall be addressed to the A/E.

BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM: http://purchasing.sc.edu

PLAN DEPOSIT AMOUNT: \$0.00 **IS DEPOSIT REFUNDABLE:** Yes No

Only those Bidding Documents/Plans obtained from the above listed source(s) are official. Bidders rely on copies of Bidding Documents/Plans obtained from any other source at their own risk.

BIDDING DOCUMENTS/PLANS ARE ALSO ON FILE FOR VIEWING PURPOSES ONLY AT *(list name and location for each plan room or other entity):*

It is the contractor's responsibility to obtain specs/plans, addenda, award, etc from the purchasing website.
http://purchasing.sc.edu

PRE-BID CONFERENCE? Yes No **MANDATORY ATTENDANCE?** Yes No

DATE: 11/5/2012 **TIME:** 10am **PLACE:** 743 Greene St., Conference Room 53, Columbia, SC

AGENCY: Facilities Planning and Construction, University of South Carolina

NAME OF AGENCY PROCUREMENT OFFICER: Ms. Juaquana Brookins

ADDRESS: Street/PO Box: 743 Greene Street

City: Columbia

State: SC ZIP: 29208-

EMAIL: jbrookin@fmc.sc.edu

TELEPHONE: 803-777-3596

FAX: 803-777-7334

BID CLOSING DATE: 11/19/2012 **TIME:** 2pm **LOCATION:** 743 Greene St., Conference Room 53, Columbia, SC

BID DELIVERY ADDRESSES:

HAND-DELIVERY:

Attn: Juaquana Brookins

Business & Finance, USC

743 Greene Street

Columbia, SC 29208

MAIL SERVICE:

Attn: Juaquana Brookins

Business & Finance, USC

743 Greene Street

Columbia, SC 29208

IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? (Agency MUST check one) Yes No

SE-310
REQUEST FOR ADVERTISEMENT

2011 Edition
Rev. 7/20/2011

APPROVED BY (*Office of State Engineer*): _____

DATE: _____

**INSTRUCTIONS TO BIDDERS
INDEFINITE DELIVERY CONTRACT – CONSTRUCTION**

SECTION I - GENERAL

A. General Information:

1. It is the intention of University of South Carolina to solicit Indefinite Delivery Contract(s) for construction services generally described as new construction, renovation, restoration, and repair work for facilities owned or operated by the Owner. Construction services are to be performed at the following location(s): All University of South Carolina campuses statewide.
2. This solicitation is to be awarded and the contract administered by one of the following methods:

- Low Bid IDC** This solicitation includes an actual project that the Owner will award, along with an Indefinite Delivery Contract, to the lowest responsive and responsible bidder. The lowest responsive and responsible bidder shall perform the construction of the actual project for its bid price. Multiple IDC contracts will be awarded under this solicitation.

Future construction services identified throughout the term of this Contract will be awarded through competitive bidding amongst contractors awarded a contract through this solicitation. A Construction Services Delivery Order will be issued to the lowest bidder for each future delivery order.

- Cost Data Guide Multiplier IDC** This solicitation utilizes a bidder-provided multiplier to apply to a published cost data guide as the basis for initial contract award and future Construction Services Delivery Orders. Bidders are to bid a multiplier that will be applied to the unit prices contained in the cost data guide listed here. Award will be based on the lowest multiplier(s). Multiple contracts may be awarded under this solicitation. The multiplier times the unit prices in the listed cost data guide times the quantity of construction services to be performed will be the basis of award for future Construction Services Delivery Orders. The quantities of construction services to be performed will be agreed upon by the Owner and Contractor. Prices listed in the cost data guide are inclusive of costs to the contractor including overhead, mobilization, installation, labor and profit. If a contractor chooses to subcontract some or all of the construction services, the same contractual multiplier is to be applied to the unit prices contained in the cost data guide for pricing the subcontracted construction services. However, if the subcontracted construction services are outside the contractor's license authority, the contractor may include a markup of 13% on the price of the subcontracted construction services. No markup is allowed for subcontracted construction services within the contractor's license category (ies) required for this solicitation. No other additions to the cost of the construction services will be permitted except the cost of Performance and Payment Bonds, if required for specific Construction Services Delivery Orders. The cost data guide and edition to be used for this solicitation is:

The Owner will identify future construction services to be done throughout the term of this Contract and will meet with the ID Contractor to develop a Request for Quotes Form and agree on which Cost Data Guide unit prices and quantities are to be used to price the construction services. Once the contractor agrees in writing on the Cost Data Guide unit prices and quantities applicable to the Request for Quotes Form, the Owner will award the Construction Services Delivery Order. If more than 20% of the construction services are not covered by the Cost Data Guide unit prices and the construction services are within the scope of this solicitation, competitive quotes will be solicited from all ID contractors. Pricing from each ID contractor shall not exceed the applicable Cost Data Guide unit prices for that portion of construction services covered by the contractual Cost Data Guide and a separate portion (lump-sum bid amount) of the quote for construction services not covered by the Cost Data Guide.

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**INSTRUCTIONS TO BIDDERS
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- Unit Price IDC** This solicitation utilizes Unit Prices, included in this bid package to be used for Delivery Orders. The contractual Unit Prices multiplied by the quantity of construction services to be performed will be the basis of award for Construction Services Delivery Orders. The Unit Prices are to be inclusive of costs to the Contractor including overhead, mobilization, installation labor and profit. The Contractor may not add any other markup to the contractual Unit Prices. If a Contractor chooses to subcontract some or all of the construction services, the same contractual Unit Prices shall be used for pricing. However, if the subcontracted construction services are outside the Contractor's license authority, as required by this solicitation, the Contractor may include a markup of 13% on the price of subcontracted construction services. No markup is allowed for construction services within the Contractor's license category (ies) required by this solicitation. No other additions to the cost of the construction services will be permitted except the cost of Performance and Payment Bonds, if required for specific Construction Services Delivery Orders.

The Owner will identify future construction services to be done throughout the term of this Contract and will meet with the ID Contractor to develop a Request for Quotes Form and agree on which Unit Prices and quantities are to be used to price the construction services. Once the contractor agrees in writing on the Unit Prices and quantities applicable to the scope of work, the Owner will award the Construction Services Delivery Order. If more than 20% of the construction services are not covered by the Unit Prices and the construction services are within the scope of this solicitation, competitive quotes will be solicited from all ID contractors. Pricing from each ID Contractor shall not exceed the applicable Unit Prices for that portion of construction services covered by the contractual Unit Prices and a separate portion (lump-sum bid amount) of the quote for construction services not covered by the Unit Prices

3. The Owner intends to award a contract to the lowest responsive and responsible bidder. The Owner will award 5 Indefinite Delivery Contracts to other bidders responding to this solicitation, starting with the second lowest responsible and responsive bidder and so forth, in the manner set forth in these instructions.
4. The Owner **does not** guarantee a minimum amount of work, **and** does not guarantee the size or quantity of any Construction Services Delivery Orders awarded pursuant to this solicitation.
5. The minimum amount of work guaranteed for this contract shall be: **\$0.00**. The Owner estimates that **\$5,000,000.00** of work will be awarded under **these** contracts. This estimate is not a representation to an offeror or contractor that the estimated quantity will be required or ordered, or that conditions affecting requirements will be stable or normal. Failure to bid or quote future work, if awarded a Contract, will result in the forfeiture of this guarantee and possible termination of the Contract.
6. This solicitation does not commit the Owner to award a Contract nor to pay for any cost incurred by the bidder in the preparation of a bid.
7. All Indefinite Delivery Contracts issued under this solicitation will be for a period of time not to exceed two years from the date of Contract execution unless otherwise stated here:
8. Each Indefinite Delivery Contract shall allow the Owner to award a Contractor a total amount of work via Construction Services Delivery Orders not exceeding **\$1,000,000**. No single Construction Services Delivery Order or project may exceed **\$250,000**.
9. The form of the Contract shall be: University of South Carolina Contract for the Indefinite Delivery of Construction Services
10. Other information concerning this solicitation:

B. Architect/Engineer:

1. The Architect or Engineer of Record (A/E) will be identified on each Construction Services Delivery Order.
2. In the absence of an A/E the Owner will act in that capacity.

C. Contractor's Licensing:

1. Contractors are required by the South Carolina Code of Laws to be properly licensed in the license

00200-IDC

INSTRUCTIONS TO BIDDERS INDEFINITE DELIVERY CONTRACT – CONSTRUCTION

category and the group classification to permit an award of Construction Services Delivery Orders of \$250,000 per single project at the time of bidding.

2. The contractor license category (ies) required for this work is: **Group 3 or greater General Contracting License, classification SR or GR**
3. **This license must be maintained for the term of the Contract.**

D. Subcontractors:

1. Some incidental work may be necessary under a Construction Services Delivery Order that will require performance not authorized by the license category required by this solicitation. A properly licensed subcontractor shall be utilized, and the terms and conditions of the Contract must be passed to the sub-contractor to protect the rights of the Owner.
2. Subcontractors shall be properly licensed as required by the South Carolina Code of Laws.
3. The Owner reserves the right to review the Contractor's proposed subcontractors and to request substitution of those to which the Owner has reasonable objection.

E. Definitions:

1. The term "Indefinite Delivery Contract" (IDC) means a contract that does not procure or specify a defined quantity of services (other than a minimum or maximum quantity) and that provides for the issuance of delivery orders for the performance of tasks during the period of the contract.
2. A Construction IDC is a contract whereby the contractor agrees to provide the Owner construction services on an "as-needed" basis during the term of the Contract.
3. A Construction Services Delivery Order is an order issued by an Owner for a Contractor to perform work (tasks) under an IDC.
4. Any reference to "Manual" means the *Manual for Planning and Execution of State Permanent Improvements-Part II* as issued by the Office of State Engineer (OSE).
5. Bidding Documents collectively referred to as the Invitation for Bids; include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement, Instructions to Bidders for IDC (00200-IDC), the Bid Form SE-330, the Intent to Award Notice (SE-370), and other sample bidding and contract forms. The proposed Contract Documents consist of the Form of the Contract for Indefinite Delivery Services Between the Owner and Contractor, Terms and Conditions of the Contract (General, Supplementary and Other Conditions), Drawings, Specifications, all Addenda issued prior to execution of the Contract, and other documents set forth in the Bidding Documents.

SECTION II – PRE-BID CONFERENCES AND SITE VISITS

- A. The Owner may hold a pre-bid conference or site visit as a prerequisite for bidding as specified in the Advertisement.
- B. The Owner has the right to schedule more than one pre-bid conference or site visit if deemed to be in the best interest of the State.
- C. As provided in Regulation 19-445.2042(B), nothing stated at the pre-bid conference shall change the Bidding Documents unless a change is made by written Addendum.
- D. As provided in Regulation 19-445.2042(B), a bidder's failure to attend an advertised pre-bid conference will not excuse its responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the State.

**INSTRUCTIONS TO BIDDERS
INDEFINITE DELIVERY CONTRACT – CONSTRUCTION**

SECTION III - OBTAINING BIDDING DOCUMENTS

- A. Bidders may obtain complete sets of the Bidding Documents from the issuing office specified in the Advertisement in the number and for the deposit sum, if any, stated therein. If so provided in the Advertisement, the deposit will be refunded to all plan holders who return the Bidding Documents in good condition within ten (10) days after receipt of bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A bidder receiving a Contract award may retain the Bidding Documents and the bidder's deposit will be refunded.
- B. Bidders shall use complete sets of documents as obtained from the source specified in the Advertisement. No partial sets will be issued.
- C. All persons obtaining Bidding Documents from the issuing office specified in the Advertisement shall provide that office with Bidder's contact information to include the Bidder's name, telephone number, mailing address, and email address.

SECTION IV - EXAMINATION OF BIDDING DOCUMENTS

- A. Bidders are expected to examine the Bidding Documents and Contract Documents thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements. Failure to do so will be at the bidder's risk. Bidder assumes responsibility for any patent ambiguity that bidder does not bring to the Owner's attention prior to bid opening.
- B. Should the bidder notice any errors, conflicts or other inconsistencies with the bidding documents, the bidder shall notify the A/E in writing.
- C. Corrections, interpretations and changes, which modify the bid documents, will be made by official addendum only. Any other form of communication, oral or written, is unofficial and non-binding on the Owner.
- D. Reference in the Bidding Documents to a designated material, product, thing, or service by specific brand or trade name followed by the words "or equal" and "or approved equal" shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition.
- E. No request to substitute materials, products, or equipment for materials, products, or equipment described in the bidding documents and no request for addition of a manufacturer or supplier to a list of approved manufacturers or suppliers in the Bidding Documents will be considered prior to receipt of Bids unless written request for approval has been received by the A/E at least ten (10) days prior to the date for receipt of bids established in the Advertisement. Any subsequent extension of the date for receipt of bids by addendum shall not extend the date for receipt of such requests unless the addendum so specifies. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the solicitation, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The A/E's decision of approval or disapproval of a proposed substitution shall be final.

SECTION V - ADDENDA

- A. If the A/E amends the Contract Documents prior to bidding, an addendum will be issued. All addenda will be sent to all prospective bidders who have obtained bid documents as specified in the Advertisement. No addendum will be issued later than 120 hours prior to time for receipt of bids except an addendum withdrawing the request for bids or one which includes postponement of the date for receipt of bids.
- B. When the date for receipt of bids is to be postponed and there is insufficient time to issue a written Addendum prior to the original Bid Date, Owner will notify prospective bidders by telephone or other appropriate means with immediate follow up with a written addendum. This addendum will verify the postponement of the original Bid Date and establish a new Bid Date. The new Bid Date will be no earlier than the fifth (5th) calendar day after the date of issuance of the addendum postponing the original or amended Bid Date.

**INSTRUCTIONS TO BIDDERS
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- C. If an emergency or unanticipated event interrupts normal government processes so that bids cannot be received at the government office designated for receipt of bids by the exact time specified in the Advertisement, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the Advertisement, or amended by addendum, on the first work day on which normal government processes resume. In lieu of an automatic extension, an addendum may be issued to reschedule bid opening. If state offices are closed at the time a pre-bid or pre-proposal conference is scheduled, an addendum will be issued to reschedule the conference. Useful information may be available at: http://www.scmd.org/scgovweb/weather_alert.html
- D. Bidders are responsible to ascertain that they have received copies of all addenda issued prior to bidding. Bids received that do not acknowledge receipt of all addenda shall be rejected as non-responsive except for the following reasons:
 - 1. The addendum only gives clarifications; or,
 - 2. The bid received clearly indicates that the bidder received the addendum; or,
 - 3. The addendum clearly would have had no effect or merely a trivial or negligible effect on price, quality, quantity, or delivery as defined in The Consolidated Procurement Code, Regulations, and Manual, and does not affect the relative standing of the Bidders. Under no circumstances can the bid amount be changed or modified.
- E. All persons obtaining Bidding Documents from the issuing office designated in the Advertisement shall provide that office with bidder's contact information to include the bidder's name, telephone number, mailing address, and email address.
- F. Addenda will be sent, and other official communications will be conducted, via e-mail unless otherwise stated in the Advertisement.

SECTION VI - PREPARATION AND DELIVERY OF BIDS

- A. Any blanks on the bid form to be filled in by the bidder shall be legibly executed in a non-erasable medium. Bids shall be signed in ink or other indelible media.
- B. Sums and multipliers shall be expressed in figures.
- C. Bidder shall not make stipulations or qualify the bid in any manner not permitted on the bid form. An incomplete bid or information not requested that is written on or attached to the Bid Form that could be considered a qualification of the bid, may be cause for rejection of the bid.
- D. Each copy of the bid shall state the legal name of the bidder and the nature of legal form of the bidder. Each copy shall be signed by the person or persons legally authorized to bind the bidder to a Contract. A bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the bidder.
- E. Bids and Bid Security, and any other documents required to be submitted with the bid should be enclosed in a sealed, opaque envelope. The envelope should be addressed to the party receiving the bids and shall be identified with the project name, number, and the bidder's name and address.
- F. The Bidder shall assume full responsibility for timely delivery of the bid at the appropriate location designated for the receipt of bids as specified in the Advertisement.
 - 1. Bidders attending the bid opening should bring their bids to the place of the bid opening and deliver the bid to the Procurement Officer of the Owner or his designee prior to the time of the bid opening.
 - 2. Bids sent by mail or special delivery service (USPS, UPS, Federal Express, etc.) should be labeled "SEALED BID ENCLOSED", and shall be addressed to the Owner's designated purchasing office as specified in the advertisement. Delivery of bids to the specified location shall be prior to the time of bid opening. Bids not received at the above location or the advertised mail room prior to the time of bid opening will be subject to rejection.
 - 3. Bidders hand delivering their bids shall deliver bids to the place of the Bid Opening as shown in the Advertisement. Whether or not bidders attend the Bid Opening, they shall give their bids to the Owner's procurement officer or his/her designee as shown in the Advertisement prior to the time of the Bid Opening.
- G. Bidders should include all special documents requested to be submitted with the bid. If these documents are not included with the bid, the bidder shall have 24 hours after the time set for the bid opening to submit these documents or the bid may be considered non-responsive.

**INSTRUCTIONS TO BIDDERS
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- H. The official time for receipt of bids will be determined by reference to the clock designated by the Owner's procurement officer or his/her designee. The Procurement Officer conducting the bid opening will determine and announce that the deadline has arrived and no further bids or bid modifications will be accepted. All bids and bid modifications in the possession of the Procurement Officer at the time the announcement is completed will be timely, whether or not the bid envelope has been date/time stamped or otherwise marked by the Procurement Officer.

SECTION VII - BIDDER'S REPRESENTATIONS

By submitting a bid for this solicitation, the bidder certifies that:

- A. **Disclosure of Conflicts of Interest or Unfair Competitive Advantage:** You warrant and represent that your bid identifies and explains any unfair competitive advantage you may have in competing for the proposed contract and any actual or potential conflicts of interest that may arise from your participation in this competition or your receipt of an award. Without limitation, an unfair competitive advantage exists where a contractor competing for award possesses either proprietary information that was obtained from a government official without proper authorization or source selection information (as defined in Regulation 19-445.2010(C) that is relevant to the contract but is not available to all competitors, and such information would assist that contractor in obtaining the contract. If you have an unfair competitive advantage or a conflict of interest, the state may withhold award. Before withholding award on these grounds, a bidder will be notified of the concerns and provided a reasonable opportunity to respond. Efforts to avoid or mitigate such concerns, including restrictions on future activities, may be considered.

- B. **Certification of Independent Price Determination: GIVING FALSE, MISLEADING, OR INCOMPLETE INFORMATION ON THIS CERTIFICATION MAY RENDER YOU SUBJECT TO PROSECUTION UNDER SECTION 16-9-10 OF THE SOUTH CAROLINA CODE OF LAWS AND OTHER APPLICABLE LAWS.**

(a) By submitting a bid, the bidder certifies that—

- (1) The prices in this bid have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to—
 - (i) Those prices;
 - (ii) The intention to submit a bid; or
 - (iii) The methods or factors used to calculate the prices offered.
- (2) The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
- (3) No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

(b) Each signature on the bid is considered to be a certification by the signatory that the signatory—

- (1) Is the person in the bidder's organization responsible for determining the prices being offered in this bid, and that the signatory has not participated and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; or
- (2)(i) Has been authorized, in writing, to act as agent for the bidder's principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs (a)(1) through (a)(3) of this certification (As used in this subdivision (b)(2)(i), the term "principals" means the person(s) in the bidder's organization responsible for determining the prices offered in this bid);
 - (ii) As an authorized agent, does certify that the principals referenced in subdivision (b)(2)(i) of this certification have not participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification; and
 - (iii) As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs (a)(1) through (a)(3) of this certification.

(c) If the bidder deletes or modifies paragraph (a)(2) of this certification, the bidder must furnish with its bid a signed statement setting forth in detail the circumstances of the disclosure.

**INSTRUCTIONS TO BIDDERS
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C. CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS:

- (a)(1) By submitting a bid, bidder certifies, to the best of its knowledge and belief, that-
- (i) Bidder and/or any of its Principals-
 - (A) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
 - (B) Have not, within a three-year period preceding this bid, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of bids; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and
 - (C) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.
 - (ii) Bidder has not, within a three-year period preceding this bid, had one or more contracts terminated for default by any public (Federal, state, or local) entity.
- (2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
- (b) Bidder shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
 - (c) If bidder is unable to certify the representations stated in paragraphs (a)(1), bidder must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the bidder's responsibility. Failure of the bidder to furnish additional information as requested by the Procurement Officer may render the bidder non-responsible.
 - (d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of a bidder is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
 - (e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the bidder knowingly or in bad faith rendered an erroneous certification, in addition to other remedies available to the State, the Procurement Officer may terminate the contract resulting from this solicitation for default.

- D. ETHICS CERTIFICATE:** By submitting a bid, the bidder certifies that the bidder has and will comply with, and has not, and will not, induce a person to violate Title 8, Chapter 13 of the South Carolina Code of Laws, as amended (ethics act). The following statutes require special attention: Section 8-13-700, regarding use of official position for financial gain; Section 8-13-705, regarding gifts to influence action of public official; Section 8-13-720, regarding offering money for advice or assistance of public official; Sections 8-13-755 and 8-13-760, regarding restrictions on employment by former public official; Section 8-13-775, prohibiting public official with economic interests from acting on contracts; Section 8-13-790, regarding recovery of kickbacks; Section 8-13-1150, regarding statements to be filed by consultants; and Section 8-13-1342, regarding restrictions on contributions by contractor to candidate who participated in awarding of contract. The state may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision. If contractor participates, directly or indirectly, in the evaluation or award of public contracts, including without limitation, change orders or task orders regarding a public contract, contractor shall, if required by law to file such a statement, provide the statement required by Section 8-13-1150 to the Procurement Officer at the same time the law requires the statement to be filed.

**INSTRUCTIONS TO BIDDERS
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- E. RESTRICTIONS APPLICABLE TO BIDDERS & GIFTS:** Violation of these restrictions may result in disqualification of your bid, suspension or debarment, and may constitute a violation of the state Ethics Act. (a) After issuance of the solicitation, bidder agrees not to discuss this procurement activity in any way with the Owner or its employees, agents or officials. All communications must be solely with the Procurement Officer. This restriction may be lifted by express written permission from the Procurement Officer. This restriction expires once a contract has been formed. (b) Unless otherwise approved in writing by the Procurement Officer, bidder agrees not to give anything to the Owner, any affiliated organizations, or the employees, agents or officials of either, prior to award. (c) bidder acknowledges that the policy of the State is that a governmental body should not accept or solicit a gift, directly or indirectly, from a donor if the governmental body has reason to believe the donor has or is seeking to obtain contractual or other business or financial relationships with the governmental body. Regulation 19-445.2165(C) broadly defines the term donor.
- F. NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING (IMPORTANT TAX NOTICE - NONRESIDENTS ONLY):** Withholding Requirements for Payments to Nonresidents: Section 12-8-550 of the South Carolina Code of Laws requires persons hiring or contracting with a nonresident conducting a business or performing personal services of a temporary nature within South Carolina to withhold 2% of each payment made to the nonresident. The withholding requirement does not apply to (1) payments on purchase orders for tangible personal property when the payments are not accompanied by services to be performed in South Carolina, (2) nonresidents who are not conducting business in South Carolina, (3) nonresidents for contracts that do not exceed \$10,000 in a calendar year, or (4) payments to a nonresident who (a) registers with either the S.C. Department of Revenue or the S.C. Secretary of State and (b) submits a Nonresident Taxpayer Registration Affidavit - Income Tax Withholding, Form I-312 to the person letting the contract.

For information about other withholding requirements (e.g., employee withholding), contact the Withholding Section at the South Carolina Department of Revenue at 803-898-5383 or visit the Department's website at: www.sctax.org

This notice is for informational purposes only. This Owner does not administer and has no authority over tax issues. All registration questions should be directed to the License and Registration Section at 803-898-5872 or to the South Carolina Department of Revenue, Registration Unit; Columbia, SC 29214-0140. All withholding questions should be directed to the Withholding Section at 803-898- 5383.

PLEASE SEE THE "NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING" FORM (FORM NUMBER I-312) LOCATED AT:
<http://www.sctax.org/Forms+and+Instructions/withholding/default.htm>

- G. SUBMITTING CONFIDENTIAL INFORMATION:** For every document bidder submits in response to or with regard to this solicitation or request, bidder must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that bidder contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged & confidential, as that phrase is used in Section 11-35-410. For every document bidder submits in response to or with regard to this solicitation or request, bidder must separately mark with the words "TRADE SECRET" every page, or portion thereof, that bidder contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "PROTECTED" every page, or portion thereof, that bidder contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire bid as confidential, trade secret, or protected! If your bid, or any part thereof, is improperly marked as confidential or trade secret or protected, the State may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation, bidder (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, & documents

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submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, & (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the State will detrimentally rely on bidder's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, bidder agrees to defend, indemnify & hold harmless the State of South Carolina, its officers & employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from the State withholding information that bidder marked as "confidential" or "trade secret" or "PROTECTED".

H. SOLICITATION INFORMATION FROM SOURCES OTHER THAN OFFICIAL SOURCE: South Carolina Business Opportunities (SCBO) is the official state government publication for State of South Carolina solicitations. Any information on State agency solicitations obtained from any other source is unofficial and any reliance placed on such information is at the bidder's sole risk and is without recourse under the South Carolina Consolidated Procurement Code.

I. TAX CREDIT FOR SUBCONTRACTING WITH MINORITY FIRMS: Pursuant to § 12-6-3350, taxpayers, who utilize certified minority subcontractors, may take a tax credit equal to 4% of the payments they make to said subcontractors. The payments claimed must be based on work performed directly for a South Carolina state contract. The credit is limited to a maximum of fifty thousand dollars annually. The taxpayer is eligible to claim the credit for 10 consecutive taxable years beginning with the taxable year in which the first payment is made to the subcontractor that qualifies for the credit. After the above ten consecutive taxable years, the taxpayer is no longer eligible for the credit. The credit may be claimed on Form TC-2, "Minority Business Credit." A copy of the subcontractor's certificate from the Governor's Office of Small and Minority Business (OSMBA) is to be attached to the contractor's income tax return. Taxpayers must maintain evidence of work performed for a State contract by the minority subcontractor. Questions regarding the tax credit and how to file are to be referred to: SC Department of Revenue, Research and Review, Phone: (803) 898-5786, Fax: (803) 898-5888. The subcontractor must be certified as to the criteria of a "Minority Firm" by the Governor's Office of Small and Minority Business Assistance (OSMBA). Certificates are issued to subcontractors upon successful completion of the certification process. Questions regarding subcontractor certification are to be referred to: Governor's Office of Small and Minority Business Assistance, Phone: (803) 734-0657, Fax: (803) 734-2498. Reference: SC §11-35-5010 – Definition for Minority Subcontractor & SC §11-35-5230 (B) – Regulations for Negotiating with State Minority Firms.

J. DRUG FREE WORKPLACE: By submitting a bid, the bidder certifies that bidder will maintain a drug free workplace in accordance with the requirements of Title 44, Chapter 107 of South Carolina Code of Laws, as amended.

SECTION VIII - WITHDRAWAL OR REVISION OF BIDS PRIOR TO BID OPENING

Prior to the time and date designated for receipt of bids, a bid submitted may be withdrawn in person or by written notice to the party receiving bids at the place designated for receipt of bids. Withdrawal by written notice shall be in writing over the signature of the bidder.

SECTION IX - OPENING OF BIDS

- A. Bids received on time will be publicly opened and will be read aloud. Owner will not read aloud bids that Owner determines, at the time of opening, to be non-responsive.
- B. At bid opening, Owner will announce the date and location of the posting of the Notice of Intended Award.
- C. The Owner will send a copy of the final bid tabulation to all bidders within ten (10) working days of the bid opening.

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- D. If Owner determines to award contract(s), Owner will, after posting a Notice of Intended Award, send a copy of the notice to all bidders.
- E. If only one bid is received, Owner will open and consider the bid.

SECTION X - IRREGULAR BIDS

- A. The Owner shall have the right to reject any or all bids, reject a bid not accompanied by a required bid security or other data required by the bidding documents, or reject a bid that is in any way incomplete or irregular.
- B. The reasons for which the Owner will reject bids include, but are not limited to:
 - 1. Failure by a bidder to be represented at a mandatory pre-bid conference or site visit;
 - 2. Failure to deliver the bid on time;
 - 3. Failure to comply with bid security requirements, except as expressly allowed by law;
 - 4. Listing an invalid electronic Bid Bond authorization number on the bid form;
 - 5. Showing any material modification(s) or exception(s) qualifying the bid;
 - 6. Faxing a bid directly to the Owner or their representative; or
 - 7. Failure to include a properly executed Power-of-Attorney with the Bid Bond.
- C. The Owner may reject a bid as nonresponsive if the prices bid are materially unbalanced between line items or sub-line items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Owner even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an advance payment.

SECTION XI - CONSIDERATION OF BIDS

- A. Failure by a bidder to correct any deficiency as requested may cause the bid to be rejected as non-responsive.
- B. The Owner shall not award a contract before the eleventh day after the Notice of Intended Award is posted. If only one bid is received and determined to be responsive and responsible, award may be made after posting the Notice of Intended Award without the ten-day waiting period.
- C. Contractor's Qualifications - A prospective Contractor shall be considered as meeting the state standards of responsibility when the firm has:
 - 1. Appropriate financial, material, equipment, facility and personnel resources and expertise, or the ability to obtain them, necessary to indicate his ability to meet all contractual requirements;
 - 2. A satisfactory record of performance;
 - 3. Satisfactory record of integrity;
 - 4. Qualified legally to contract with the State;
 - 5. Supplied all necessary information in connection with the inquiry concerning responsibility;
- D. Owner will make a determination of bidder's responsibility before awarding a contract. Bidder shall provide all information and documentation requested by the Owner to support the Owner's evaluation of responsibility. Failure of bidder to provide requested information is cause for the Owner, at its option, to determine the bidder to be non-responsible
- E. Pursuant to §11-35-1520(8), the Procurement Officer may elect to communicate with a bidder, after bid opening, for the purpose of clarifying either the bid or the requirements of the Invitation for Bids. Such communications may be conducted only with bidders who have submitted a bid which obviously conforms in all material aspects to the Invitation for Bids and only in accordance with Appendix D (Paragraph A(6)) to the *Manual for Planning and Execution of State Permanent Improvements, Part II*. Clarification of a Bid must be documented in writing and included with the bid. Clarifications may not be used to revise a bid or the Invitation for Bids. [§ 11-35-1520(8); R.19-445.2080]

SECTION XII - AWARD OF CONTRACT

- A. At the conclusion of the ten day waiting period on the eleventh day after the Notice of Intended Award is issued, the Owner will issue to the successful bidder(s) a Contract.
- B. The successful bidder(s) shall obtain, and forward to the Owner, a copy of the certificate of insurance as required by the Contract and the copies of the Contract signed by the bidder.
- C. After the Contract is fully executed work may be awarded to the successful bidder in the manner described in the Contract.

**INSTRUCTIONS TO BIDDERS
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SECTION XIII - BONDS

- A. If required by the Invitation for Bids, each bid shall be accompanied by a bid security in an amount of not less than **five percent of the base bid**. The bid security shall be a bid bond or a certified cashier's check. The bidder pledges to enter into a Contract with the Owner on the terms stated in the bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
- B. If a surety bond is required, it shall be written on AIA Document A310 Bid Bond, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney. The Bid Bond shall:
 - 1. Be issued by a surety company licensed to do business in South Carolina;
 - 2. Be issued by a surety company having, at a minimum, a "Best Rating" of "A" as stated in the most current publication of "Best's Key Rating Guide, Property-Casualty", which company shows a financial strength rating of at least five (5) times the contract price.
 - 3. Be enclosed in the bid envelope at the time of bid opening, either in paper copy or as an electronic bid bond authorization number provided on the Bid Form and issued by a firm or organization authorized by the surety to receive, authenticate and issue binding electronic bid bonds on behalf the surety.
- C. By submitting a Bid Bond via an electronic bid bond authorization number on the Bid Form and signing the Bid Form, the bidder certifies that an electronic bid bond has been executed by a Surety meeting the standards required by the Bidding Documents and the Bidder and Surety are firmly bound unto the State of South Carolina under the conditions provided in this Section.
- D. The Owner will have the right to retain the bid security of bidders to whom an award is being considered until either (a) the Contract has been executed and Performance and Payment Bonds, if required, have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn or (c) all bids have been rejected.
- E. The Performance and Payment Bonds shall conform to the requirements of the Contract. If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid or be added to the cost of the Construction Services Delivery Order. Performance Bonds and Labor & Material Payment Bonds in the amount of 100% of the Construction Services Delivery Order amount are required for all Construction Services Delivery Orders exceeding \$50,000. The Owner may require bonds on Construction Services Delivery Orders under \$50,000.

SECTION XIV - OTHER INFORMATION

A. POSTING OF INTENT TO AWARD

Notice of Intent to Award, SE-370, will be posted at the following location:

Room or Area of Posting: Lobby

Building Where Posted: Facilities Administration Building

Address of Building: 743 Greene Street, Columbia, SC 29208

WEB site address (if applicable): <http://purchasing.sc.edu>

Posting date will be announced at the bid opening. In addition to posting the notice, the Owner will promptly send all responsive bidders a copy of the notice of intent to award and the final bid tabulation.

B. PROTEST OF SOLICITATION OR AWARD

Any prospective bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the solicitation of a contract shall protest within fifteen days of the date of issuance of the applicable solicitation document at issue. Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract shall protest within ten days of the date notification of intent to award is posted in accordance with Title 11, Chapter 35, Section 4210 of the South Carolina Code of Laws, as amended. A protest shall be in writing, shall set forth the grounds of the protest and the relief requested with enough particularity to give notice of the issues to be decided, and must be received by the State Engineer within the time provided.

00200-IDC
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Any protest must be addressed to the CPOC, Office of State Engineer, and submitted in writing:

- (a) by email to protest-ose@mmo.sc.gov, or
- (b) by facsimile at 803-737-0639, or
- (c) by post or delivery to 1201 Main Street, Suite 600, Columbia, SC 29201.

By submitting a protest to the foregoing email address, you (and any person acting on your behalf) consent to receive communications regarding your protest (and any related protests) at the e-mail address from which you sent your protest.

- C. Special documents required to be submitted with the Bid for this project include:
 - 1. *NONE*

END OF DOCUMENT

A310

**Bid Bond
(2010 Edition)**

**Original AIA Document on file at the office of
University of South Carolina
743 Greene Street
Columbia, South Carolina 29208**

University of South Carolina Contract for the Indefinite Delivery of Construction Services

THIS CONTRACT, made this ____ day of _____, 20____, by and between

OWNER

Board of Trustees c/o
University of South Carolina
743 Greene Street
Columbia, South Carolina 29208

CONTRACTOR

WHEREAS, the Owner requires the delivery of **Indefinite Delivery of Roofing Contracting Services** (*Type of Construction Services for this Contract*) construction services on an as-needed basis, hereinafter referred to as the "Construction Services", for the following Project identified as follows:

H27-D170-CA

(*State Project Number*)

Indefinite Delivery of Roofing Contracting Services ; and
(*Project Name*)

WHEREAS, the CONTRACTOR, whose FEIN/SSN is _____ and whose South Carolina Contractor's license is _____ is prepared and qualified to provide such services.

NOW THEREFORE, the Owner and Contractor agree to all of the following terms and conditions set forth in this Contract.

THE EFFECTIVE DATE of this Contract shall commence as of the date written above and the term shall be for a period not to exceed two years and will end as of _____. The term of this Contract may not be extended by amendment.

THE SERVICES REQUESTED by the Owner shall be set forth in a Request for Quotes Form for specific construction services. The Contractor agrees to accept all such requests for services issued by the Owner, unless the work requested is not within the expertise or license limitations of the Contractor; or as agreed by the Owner for just cause in the mutual interests of the Owner and Contractor.

THE SERVICES PROVIDED by the Contractor shall be set forth in the Owner's Construction Services Delivery Order which, once the Contractor's proposal is approved by the Owner, shall be incorporated into this Contract, and all work shall be performed by the Contractor in accordance with the Terms and Conditions of this Contract.

PAYMENTS TO THE CONTRACTOR for acceptable work performed shall be as follows:

THE MAXIMUM AMOUNT to be paid for all work under the terms of this agreement is: **\$1,000,000**

THE MAXIMUM DELIVERY ORDER AMOUNT to be paid for construction services is: **\$250,000**

THE CONTRACTOR'S COST PROPOSALS shall be based on the following method: (*choose one*)

LOW BID

Initial Contract Amount:

\$ _____

UNIT PRICES

Based on the attached Bid Form

MULTIPLIER of _____ using:

[*Enter Name and Edition of the applicable cost data guide*]

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE ENTERED INTO THIS CONTRACT ON THE DAY AND YEAR FIRST WRITTEN ABOVE.

OWNER

CONTRACTOR

BY: _____
(*Signature of Owner's Representative*)

Amy Stone
(*Print or Type Name of Owner's Representative*)

ITS: Secretary of Board of Trustee's
(*Title of Owner's Representative*)

BY: _____
(*Signature of Contractor's Representative*)

(*Print or Type Name of Contractor's Representative*)

ITS: _____
(*Title of Contractor's Representative*)

**Terms and Conditions of the University of South Carolina Contract for
Indefinite Delivery of Construction Services**

ARTICLE 1 - GENERAL

- A. The Contractor agrees to provide construction services to the Owner as required by the Owner and as set forth in a Construction Services Delivery Order that the Owner may issue from time to time during the term of this Contract.
- B. Work by the Contractor shall be performed only in response to a duly authorized Construction Services Delivery Order issued by the Owner.
- C. The maximum amount of each Construction Services Delivery Order, including modifications shall not exceed **\$250,000** per project nor shall the total amount of all Construction Services Delivery Orders, including modifications, exceed **\$1,000,000** during the term of this Contract.
- D. The duration of this Contract shall not be extended by amendment nor renewed for an additional period. Construction Services Delivery Orders authorized by the Owner within the term of the Contract may be completed by the Contractor even though the completion date may extend beyond the term of the Contract.
- E. This Contract will guarantee a minimum of work of **\$0.00** per Contract. Failure to bid or quote on Construction Services Delivery Orders as requested by the Owner will result in forfeiture of this guarantee.
- F. The Contractor covenants with the Owner to furnish its best skill and judgment and to cooperate with the Owner and any other contractors in furthering the interests of the Owner.
- G. The construction services provided pursuant to this Contract shall be performed in accordance with the applicable requirements of the Manual for Planning and Execution of State Permanent Improvements-Part II.
- H. The Contract Documents forming this agreement shall consist of the following: (1) **University of South Carolina** Contract for the Delivery of Indefinite Delivery of Construction Services and the Terms and Conditions of the **University of South Carolina** Contract for Indefinite Delivery of Construction Services (this document) and any listed attachments and supplementary conditions thereto; (2) the Bidding Documents and all Addenda thereto; (3) the Contractor's completed Bid Form **SE-330**; (4) the Contractor's individual Request for Quotes Form proposals submitted pursuant to an authorized Construction Services Delivery Order; (5) any Construction Services Delivery Orders, Form **SE-680**, issued under this Contract; (6) all Construction Services Delivery Order Modifications, Form **SE-690**; and (7) the **00200-IDC**.

ARTICLE 2 – AUTHORIZATION OF SERVICES

- A. The Contractor shall not incur any expense chargeable to the Owner on or about the work of any Construction Services Delivery Order assigned to this Contract until award of the Construction Services Delivery Order has been duly authorized and fully executed by both the Owner and the Contractor.
- B. The Owner will initiate a Request for Quotes Form of work for construction services and will provide adequate project information as required.
- C. The Contractor shall prepare a proposal to complete the work as requested. The proposal will be submitted to the Owner within one (1) week of the request or as otherwise requested by the Owner in the specific request.
- D. The Contractor shall include in each proposal a schedule showing the anticipated dates for completion of various milestones of the work.
- E. The proposal shall include the cost of the construction services prepared according to the method described in the Contract. The cost portion of the proposal shall be by one of the following methods determined by the solicitation and noted on the contract (page 1 of this document):
 - a. Low Bid – The Contractor shall provide a bid on the Construction Services Request for Quotes Form to be completed for each project.
 - b. Cost Data Guide Multiplier - The Contractor shall use their bid multiplier times the unit prices contained in the cost data guide as listed on Page 1 of this Contract times the number of units for the work in the proposed Request for Quotes Form of work.
 - c. Unit Prices - The Contractor shall use the unit prices contained in their Bid of the Contract, times the number of units for the work in the proposed Request for Quotes Form of work.
 - d. Note: Should unit prices or cost data guide line items not be available for items of work to be included in the Construction Services Request for Quotes Form, the Contractor shall prepare a proposal including labor and material cost breakdown with overhead and profit added as follows for that portion of the work not covered by either the unit prices or cost data guide:
 - 1. For the Contractor or subcontractor on work performed by their own forces, 13% of the actual costs.

**Terms and Conditions of the University of South Carolina Contract for
Indefinite Delivery of Construction Services**

2. For the Contractor on work performed by its subcontractors, 10% of the subcontractor's actual costs (not including the subcontractor's overhead and profit).
- e. Nothing in this Contract prohibits a Contractor from submitting a price lower than that which would be established using their initial cost data guide multiplier or unit prices.
- F. The Owner, upon receipt will review the Contractor's proposal in a timely manner and accept or reject it. Except for delivery orders based on competitive bidding, prior to approving a Construction Services Delivery Order, the Owner reserves the right to negotiate with the Contractor to revise the scope of the proposed construction services and costs that are believed to be in the best interest of the State. For delivery orders based on competitive bidding, the Owner must allow all bidders the opportunity to revise their proposals for significant changes in the scope of work.
- G. Upon acceptance of a proposal the Owner will issue a Construction Services Delivery Order toward this Contract.
- H. If the Contractor fails to provide a cost proposal within the required time limit, or otherwise provides a response that the Owner deems, in its sole discretion, to be unacceptable, the Owner may withdraw the request and use an alternative contractor or alternative method of procurement to provide the construction services.
- I. The Owner's approval of a Construction Services Delivery Order shall be the Contractor's Notice to Proceed with the work. The time limits stated in the Construction Services Delivery Order are of the essence. By executing the Construction Services Delivery Order, the Contractor confirms that the performance dates in the Construction Services Delivery Order constitutes a reasonable period for performing the work.

ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor shall designate one or more representatives to be assigned for the duration of the project. These representatives shall be authorized to act on behalf of the Contractor in all matters related to the Contractor's performance under this Contract. The Contractor shall not replace a designated representative except for good cause shown and with approval of the Owner.
- B. The Contractor warrants to the Owner that:
 1. It and its subcontractor(s) (if any) are financially able to complete the work.
 2. It will perform all obligations, furnish all material, equipment, tools, transportation, supplies and labor to complete the work assigned.
 3. It is authorized and properly licensed to do business in the State of South Carolina and the local jurisdiction in the area of the work site.
 4. It is duly authorized to execute the Contract and accept Construction Services Delivery Orders.
 5. It possesses a high level of experience and expertise in the business administration, construction, management, and supervision of projects that may be assigned to this Contract, and will perform the work with care and diligence in a professional and workmanlike manner.
- C. The Contractor shall have, at the time of execution of this Contract, all professional and business insurance, licenses and permits legally required to provide the required construction services in the State of South Carolina and as required by this Contract.
- D. The Contractor shall perform construction services as required by any Construction Services Delivery Order signed by both parties.
 1. The Contractor shall pay for required business license fees, labor, materials, equipment, tools, transportation, supervision, testing, etc., as required for the performance of the work or as specified in approved Construction Services Delivery Order.
 2. The Contractor shall visit the site and take measurements, observations, tests or otherwise obtain information to assist in familiarization with the work site, its conditions and limitations that would affect the performance of the work.
 3. The Contractor shall review the documents furnished with the Owner's Construction Services Delivery Order to become familiar with the requirements of the project and understand the scope of work required. The Contractor shall have the right to rely on information contained in the proposal documents. Such reliance requires that the Contractor shall review all information provided by the Owner, including that available by visiting the site, exercising care, skill and diligence of a contractor experienced in the work required, and shall give prompt and timely notice to the Owner of any apparent deficiencies or inconsistencies in the information furnished by the Owner or the A/E.

**Terms and Conditions of the University of South Carolina Contract for
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4. In the event of inconsistencies within or between parts of the Construction Services Delivery Order or between the Construction Services Delivery Order and applicable standards, codes, and ordinances, the Contractor shall: (1) provide the better quality or greater quantity of work; or, (2) comply with the more stringent requirement; either or both in accordance with the A/E's interpretation.
- E. The Contractor does not have the responsibility to determine that the design of the project is in conformance with applicable building codes and regulations, but if during the review of the Construction Services Delivery Order, it is found that any apparent violations exist, it is the Contractor's responsibility to inform the A/E and the Owner of such apparent violation.
- F. The Contractor is responsible for construction means, methods, techniques, procedures and safety measures in the performance of the work.
- G. The Owner shall obtain, at its own cost, general building and specialty inspection services and material testing as required by the Contract Documents. The Contractor shall coordinate and call for inspections or material testing as needed during the construction process. The Contractor shall be responsible for payment of any charges imposed for re-inspections or re-testing due to failed inspections or tests.
- H. The Contractor shall employ only persons skilled in the work for which they are to do, employ an experienced superintendent to supervise the work, and shall be responsible for the acts or omissions of the Contractor's agents and employees or those of subcontractors and their agents and employees acting on behalf of the Contractor.
- I. The Contractor shall cooperate with and coordinate its work with the work of others.
- J. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect, including but not limited to providing necessary resources, with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate change directive shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 4 -OWNER'S RESPONSIBILITIES

- A. The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. The Architect does not have such authority. The term "Owner" means the Owner or the Owner's Representative.
- B. The Owner does not warrant the accuracy of any information requested by the Contractor that is not otherwise required of the Owner by the Contract Documents. Neither the Owner nor the Architect shall be required to conduct investigations or to furnish the Contractor with any information concerning characteristics or other conditions of the area where the work is to be performed beyond that which is provided for in the Contract Documents.
- C. The Owner assumes no responsibility for any conclusions or interpretation made by the Contractor based on information made available by the Owner.
- D. The Owner shall designate one or more representatives with authority to act and make binding decisions on the Owner's behalf in all matters related to the Owner's duties under this Contract.
- E. The Owner shall secure and pay for all design permits, assessments, and easements except as required by any Construction Services Delivery Order issued under the terms of the Contract.
- F. The Owner shall obtain, at its own cost, general building, specialty inspection services and material testing as required by the Contract Documents.
- G. The Owner shall make timely decisions on all issues related to the Construction Services Delivery Order and shall promptly advise the Contractor of any errors or deficiencies in the Contractor's performance under this Contract.
- H. The Owner shall pay the Contractor for acceptable work performed, in accordance with the provisions of this Contract.

**Terms and Conditions of the University of South Carolina Contract for
Indefinite Delivery of Construction Services**

ARTICLE 5 – A/E’S RESPONSIBILITIES

- A. The term "Architect," "Architect/Engineer," or "A/E" is the entity named as such in the Request for Quotes Form. The Architect or A/E may be the Owner, if so designated. In the absence of a licensed design professional, these terms mean the Owner.
- B. The A/E and the A/E’s consultants shall be deemed the authors and owners of their respective Instruments of Service and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as a violation of the A/E’s or A/E’s consultants’ reserved rights.
- C. The A/E shall represent the Owner during the construction process through final completion of the project, and as requested during the warranty period. The A/E will act on behalf of the Owner only to the extent provided in the Construction Services Delivery Order or otherwise agreed by the Owner.
- D. The A/E, as a representative of the Owner, shall visit the site as necessary to fulfill its obligations to the Owner for inspection services, if any, and, at a minimum, to assure conformance with the A/E’s design as shown in the Construction Services Delivery Order and to observe the progress and quality of the various components of the Contractors work. The A/E shall (1) keep the Owner informed about the progress and quality of the work completed, (2) endeavor to guard the Owner against defects and deficiencies in the work, and (3) determine if the work is being performed in a manner indicating that the work, when fully completed, will be in accordance with the Construction Services Delivery Order.
- E. The A/E will make recommendations to the Owner as to acceptance or rejection of the work and communicate the Owner’s decision to the Contractor.
- F. The A/E will review and approve or reject shop drawings and samples submitted by the Contractor.
- G. The A/E shall respond promptly to all requests for information or clarification from the Owner or the Contractor.
- H. The A/E will make the initial interpretation and decision on matters concerning performance under, and requirements of, a Construction Services Delivery Order on written request of either the Owner or Contractor. Upon receipt of such request, the A/E shall promptly notify the non-requesting party in writing of the details of such request. The A/E’s response to such requests will be made writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the A/E shall be furnished, then delay shall not be recognized on account of failure by the A/E to furnish such interpretations until fourteen (14) days after written request is made for them. The interpretation or decision of the A/E shall be final, subject to the dispute resolution provisions of this Contract.
- I. The A/E will not be responsible for construction means, methods, techniques, procedures and safety measures in the performance of the work nor acts or omissions of the Contractor, Subcontractors or any other entity performing work on the site.
- J. The A/E will review periodic requests for payment, and approve or reject the request, in whole or in part.
- K. The A/E will prepare Construction Services Delivery Order Modifications or change directives as directed by the Owner.
- L. Any reference in the Contract Documents to the A/E taking action or rendering a decision within a “reasonable time” or “timely manner” is understood to mean no more than fourteen (14) days, unless otherwise specified in the Contract Documents or otherwise agreed to by the parties.

ARTICLE 6 - CONSTRUCTION ADMINISTRATION

- A. Shop Drawings and Samples:
 - 1. The Contractor shall submit Shop Drawings as required by the Construction Services Delivery Order, consisting of drawings, diagrams, illustrations, schedules, brochures, and other data which are prepared by the Contractor, subcontractor, manufacturer, supplier, or distributor and that depict that portion of the work.
 - 2. The Contractor shall review and approve Shop Drawings prior to their submission to the A/E. Such review shall be for compliance with the requirements of the Construction Services Delivery Order and to ensure complete coordination of the work. Shop Drawings approved by the Contractor shall bear a stamp denoting that they have been reviewed and are "approved" or "approved as noted" or similar designation.

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3. The Contractor shall submit the number of sets as specified in the Construction Services Delivery Order, or in the absence of a specification, submit enough copies for the Owner to retain two copies plus the number desired to be returned to the Contractor.
 4. The A/E will review the Shop Drawings with reasonable promptness but only for conformity with the design and performance requirements as indicated in the Construction Services Delivery Order.
 5. The Contractor shall submit samples as required by the Construction Services Delivery Order, consisting of physical examples furnished by the Contractor of sufficient size and quantity to provide an acceptable representation of the material proposed to be installed. Samples submitted will not be returned unless requested by Contractor and agreed to by the A/E. The Contractor shall pay shipping costs. The final installed product shall match the approved sample.
- B. Materials and Workmanship:
1. The Contractor shall not allow the use of any asbestos containing product, whether temporary or permanent and whether or not incorporated or to be incorporated in the work, even if the products are non-friable and/or contain minimal amounts of asbestos, and even though such products may still be legally installed.
 2. The Contractor shall not use or allow the use of lead materials in public water applications. Lead free solder, flux and pipe must be used in all public drinking water and waste water applications. Lead free solder and flux is defined as containing less than 0.2% lead while valves, pipes and appurtenances must contain less than 8.0% lead.
 3. The Contractor warrants that unless otherwise specified or permitted by the Construction Services Delivery Order, all materials shall be new, in first class condition, and installed using workmanship of the highest quality in accordance with the Construction Services Delivery Order.
 4. Work, materials, or equipment not conforming to these requirements shall be considered defective. Unless caused by the Contractor or a subcontractor at any tier, the Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage.
 5. The Contractor accepts assignment of all materials and equipment by the Owner that are identified as part of the Contract Documents. The Contractor shall, upon delivery, be responsible for the storage, protection, proper installation, and preservation of such Owner purchased items, if any, as if the Contractor were the original purchaser. The Contract Sum includes, without limitation, all costs and expenses in connection with the storage, insurance, installation, and testing of items. Unless the Contract Documents specifically provide otherwise, all Contractor warranty of workmanship and correction of the work obligations under the Contract Documents shall apply to the Contractor's installation of and modifications to any Owner purchased items,.
- C. Inspection and Testing of Materials:
1. The Owner shall have performed and documented all inspections and tests required by the Construction Services Delivery Order.
 2. The Contractor shall leave uncovered all areas of work that will be covered that are called out in the Construction Services Delivery Order to be left uncovered, or the A/E requests to be left uncovered prior to being inspected. The Contractor shall give adequate notice to the A/E of the time requested for an inspection of areas to be covered.
 3. If the Contractor covers areas that were to be left uncovered, or otherwise fails to have performed the required inspections and tests, the Contractor shall cause the area to be uncovered for inspection and testing. After being inspected, the Contractor shall repair the area with craftsmen skilled in the appropriate trades needed for the repair at no additional cost to the Owner.
- D. Substitutions:
1. The Contractor's requests for substitutions shall be submitted and negotiated prior to the execution of each Construction Services Delivery Order.

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2. Wherever the Construction Services Delivery Order specifies a particular product, article, appliance, equipment, or material and it is designated by manufacturer and model number, it is the intent to designate a level of quality, finish, appearance, function, or other factor that was desirable to have incorporated into the design. It is not intended to limit competition. Other manufacturer's listed as "approved equal" may be used, but the products by that manufacturer must meet or exceed the specification for the specified product. The Contractor must submit adequate information about the product to show that the submitted product meets the level of quality as the product specified.
 3. If the Contractor desires to substitute a product for one that is not readily available due to extenuating circumstances, a request may be submitted for review to the A/E. Along with the product information submittal, the Contractor shall list the reason(s) for requesting the substitution, and the benefit to the State for accepting substituted product. The A/E's decision on the request is final.
 4. The Contractor shall not substitute any product, article, appliance, equipment, or material that is specified without prior written approval from the A/E, which shall be granted only with the concurrence of the Owner.
- E. Changes in the Work:
1. The Owner may authorize changes in the scope of a Construction Services Delivery Order without invalidating the Construction Services Delivery Order or this Contract by issuing a Construction Services Delivery Order Modification (Form SE-690) and the Contractor shall execute the changed work promptly.
 2. Any changes in the work must be approved by the Owner and executed by Form SE-690 signed by the Contractor and A/E.
 3. The cost of any Construction Services Delivery Order Modification shall be calculated using the same method as pricing the Construction Services Delivery Order.
 4. In the absence of a total agreement concerning the item(s) for a Construction Services Delivery Order Modification, a change directive shall be issued and the Contractor shall proceed diligently with performance of the Construction Services Delivery Order.
- F. Receiving and Storing Materials and Equipment:
1. The Contractor shall have an authorized person or persons to receive all items and shall properly unload, check for completeness of shipment, and in-transit damage.
 2. The Contractor shall properly handle and store materials, supplies, equipment etc. in accordance with the Construction Services Delivery Order or manufacturers printed instructions for each product.
 3. Protection of construction materials and equipment stored at the project site from weather, theft, vandalism, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall perform the work in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the work and all adjacent areas. The work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions.
- G. Schedule and Reports
1. At the time of approval of the Construction Services Delivery Order by the Owner, the Contractor shall present a construction schedule in a form satisfactory to the A/E. The schedule shall identify important tasks and identify the critical path.
 2. The Contractor shall submit an up-dated progress schedule with each monthly request for payment showing scheduled dates and actual completion dates. If the work falls behind schedule, the Contractor shall present a plan for completion of the work by the time for completion.
- H. Time for Completion:
1. The Time for Completion will be identified in each Construction Services Delivery Order, and will be the amount of time agreed to by the Owner and the contractor as: required for completion of the work of that Construction Services Delivery Order.
 2. Requests for any extension of time shall be made monthly with the application for payment. Delays of the work due to circumstances beyond the control of the contractor shall be adequately documented and submitted to the Owner with any request for an extension of the Time for Completion.

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3. The time for completion shown in the Construction Services Delivery Order shall include five (5) calendar days for delays due to inclement weather per calendar month. Delays due to weather beyond the five (5) days may be requested as a time extension to the time for completion. The Contractor shall submit job site weather data supporting the claim for an extension of time;
 4. The A/E will promptly review each request for time extension. The A/E shall make a recommendation and the Owner shall approve or reject the request, and so inform the Contractor. Changes in Contract Time shall be documented on Form SE-690.
 5. Should completion of the Construction Services Delivery Order extend past the original or amended Construction Services Delivery Order completion date, the Owner will calculate liquidated damages in the amount listed in the Construction Services Delivery Order and reduce the Contractor's final payment by that amount.
- I. Guarantee:
1. The Contractor shall remedy and make well all defects in material and workmanship at no additional cost to the Owner and pay for any damage to other work or property resulting from such defects for a period of one year from the date of Substantial Completion excepting defects that are due to misuse or abuse by the Owner.
 2. The issuance of a Certificate of Substantial Completion, **SE-550**, does not relieve the Contractor from liability for defective workmanship or materials.
 3. Where guarantees and/or warranties are required in the technical sections of the specifications, or as noted on the drawings, exceeding the one-year guarantee period, the extended warranty period will govern.
 4. Nothing contained in this Article shall be construed to establish a period of limitation with respect to other obligations the Contractor might have under the Contract Documents.
- J. Use of the Site:
1. The Contractor shall confine its operations to areas permitted by laws and ordinances, and as defined in the Construction Services Delivery Order. The site must be maintained in a reasonably clean condition, free of trash and debris. The Contractor shall, on a regular basis, remove from the site all trash, debris, tools and equipment no longer needed for the work.
 2. The Contractor shall provide access to the work in progress for representatives of the Owner, A/E and for all authorities having jurisdiction over the work.

ARTICLE 7 - PAYMENTS

- A. Payments by the Owner to the Contractor for acceptable work performed shall be made in accordance with Title 29, Chapter 6 of the SC Code of Laws, as amended.
- B. Payments by the Contractor to Subcontractors for acceptable work performed shall be made in accordance with Title 29, Chapter 6 of the SC Code of Laws, as amended.
- C. Payments by the Contractor and Subcontractors to laborers and others shall be made in accordance with Title 29, Chapter 7 of the SC Code of Laws, as amended.
- D. The Contractor shall comply with the requirements of Title 12, Chapter 9 of the South Carolina Code of Laws, as amended, regarding withholding tax for nonresidents, employees, contractors and subcontractors.
- E. If the Contractor intends to request progress payments, the Contractor shall submit to the A/E for its approval, a schedule of values showing the cost breakdown of the various divisions of work. The divisions of work shall be formatted using Construction Specifications Institute (CSI) format or a format agreed to by the A/E. The total of the schedule of values shall be the amount of the Construction Services Delivery Order and any modifications.
- F. Any schedule of values that fails to include sufficient detail, is unbalanced, or exhibits "front-loading" of the value of the work shall be rejected.
- G. The Contractor shall submit all applications for payment to the A/E. The A/E shall review the application to determine the amount due the Contractor, based on the approved schedule of values for the work listed in the application for payment and acceptably performed, and forward its certification to the Owner within seven days of receipt.
- H. Applications for payment may include materials suitably stored on site for use in the work. Materials stored off site may be approved for payment providing the Contractor submits:
 1. Documentation showing the location of the material;
 2. Proof of purchase & delivery;
 3. Certificate of insurance for the material with adequate coverage showing the Owner as the certificate holder;

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4. The material is stored in a bonded warehouse, segregated and posted with a sign designating ownership by the Owner.
- I. The Owner shall retain funds from the applications for payment in the amount of 3.5% of the total requested. Retained funds shall be held until final completion of the Construction Services Delivery Order.
- J. When the Contractor has fully performed the work of the Construction Services Delivery Order and has been granted a Certificate of Final Completion, SE-560, the Contractor may submit its application for final payment and release of retained funds to the A/E. The request shall be accompanied by the Consent of Surety to Final Payment (for bonded Construction Services Delivery Orders), and Releases of Liens from all sub-contractors (if any). If the work is completed to the satisfaction of the A/E, the A/E shall certify the application and the Owner shall make final payment.

ARTICLE 8 – CLAIMS & DISPUTE RESOLUTION

- A. Each party may assert a Claim requesting an adjustment of the Contract or Construction Services Delivery Order terms, an adjustment in the Construction Services Delivery Order sum, a change in the Construction Services Delivery Order time for completion, or other relief with respect to the terms of the Contract or Construction Services Delivery Order.
- B. Claims under this Contract shall be submitted in writing. A voucher, invoice, payment application or other routine request for payment that is not in dispute when submitted is not a Claim under this definition. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.
- C. Claims arising prior to the date final payment is due must be initiated within twenty-one (21) days after occurrence of the event giving rise to such Claim or within twenty-one (21) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. By failing to give written notice of a Claim within the time required by this paragraph, a party expressly waives its claim.
- D. Pending a resolution of the Claim, including any dispute resolution under this Contract, the Contractor shall proceed to perform as required by the Construction Services Delivery Order and the Owner shall continue to make payments in accordance with this Contract.
- E. The Contractor consents to be governed by § 11-35-4230 of the SC Code of Laws, as amended, and agrees that § 11-35-4230 applies to and governs the Contract. The Contractor waives any objection it may have now or hereafter to the administrative process required by § 11-35-4230. To the extent that § 11-35-4230, by its own terms, does not govern a claim or controversy arising out of or relating to the Contract, the Contractor agrees that any suit, action or proceeding arising out of or relating to the Contract shall be instituted and maintained only in a State or Federal court located in the County in which the Owner maintains its principle place of business, in the State of the South Carolina Budget & Control Board.
- F. Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any claims or controversies relating to the Contract; for any court action in connection therewith; or for the entry of judgment on any award made, may be served on Contractor by certified mail (return receipt requested) addressed to Contractor at the address provided for the Contractor's Senior Representative or by personal service or by any other manner that is permitted by law, in or outside South Carolina. Notice by certified mail is deemed duly given upon deposit in the United States Postal Service.
- G. Notwithstanding any other provision of the Contract Documents, but subject to a duty of good faith and fair dealing, the Contractor and Owner waive Claims against each other for listed damages arising out of or relating to this Contract. For the Owner, listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) costs suffered by a third party unable to commence work, (vi) attorney's fees, (vii) any interest, except to the extent allowed by law (viii) lost revenue and profit for lost use of the property, (ix) costs resulting from lost productivity or efficiency. For the Contractor, listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) attorney's fees, (vi) any interest, except to the extent allowed by law; (vii) unamortized equipment costs; and, (viii) losses incurred by subcontractors for the types of damages the Contractor has waive as against the Owner. Without limitation, this mutual waiver is applicable to all damages due to either party's

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termination in accordance with Articles 9 or 10. Nothing contained in this Section shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

- H. Notwithstanding any other provision of the Contract Documents, but subject to a duty of good faith and fair dealing, the Contractor waives all claims against the Architect and any other design professionals who provide design and/or project management services to the Owner, either directly or as independent contractors or subcontractors to the Architect, for listed damages arising out of or relating to this Contract. The listed damages are (i) lost revenue and profit, (ii) losses resulting from injury to business or reputation, (iii) additional or escalated overhead and administration expenses, (iv) additional financing costs, (v) attorney's fees, (vi) any interest; (vii) unamortized equipment costs; and, (viii) losses incurred by subcontractors for the types of damages the Contractor has waived as against the Owner.
- I. DUTY OF COOPERATION:
1. Contractor and Owner are fully committed to working with each other throughout the Project to avoid or minimize claims. To further this goal, Contractor and Owner agree to communicate regularly with each other at all times notifying one another as soon as reasonably possible of any issue that if not addressed may cause loss, delay, and/or disruption of the work. If claims do arise, Contractor and Owner each commit to resolving such claims in an amicable, professional, and expeditious manner to avoid unnecessary losses, delays, and disruptions to the work.
 2. In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.
- J. RESOLUTION OF DISPUTES:
1. If a claim is not resolved pursuant to Section I above to the satisfaction of either party, both parties shall attempt to resolve the dispute at the field level through discussions between Contractor's Representative and Owner's Representative. If a dispute cannot be resolved through Contractor's Representative and Owner's Representative, then the Contractor's Senior Representative and the Owner's Senior Representative, upon the request of either party, shall meet as soon as conveniently possible, but in no case later than twenty-one days after such a request is made, to attempt to resolve such dispute. Prior to any meetings between the Senior Representatives, the parties will exchange relevant information that will assist the parties in resolving their dispute. The meetings required by this Section are a condition precedent to resolution pursuant to Section J 2.
 2. If after meeting in accordance with the provisions of this Section, the Senior Representatives determine that the dispute cannot be resolved on terms satisfactory to both the Contractor and the Owner, then either party may submit the dispute by written request to South Carolina's Chief Procurement Officer for Construction (CPOC). Except as otherwise provided in this Article, all claims or controversies relating to the Contract shall be resolved exclusively by the appropriate Chief Procurement Officer in accordance with Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws, or in the absence of jurisdiction, only in the Court of Common Pleas for or a federal court located in, Richland County, State of South Carolina. Contractor agrees that any act by the State regarding the Contract is not a waiver of either the State's sovereign immunity or the State's immunity under the Eleventh Amendment of the United States Constitution.
 3. If any party seeks resolution to a dispute pursuant to Section J 2 above, the parties shall participate in non-binding mediation to resolve the claim. If the claim is governed by Title 11, Chapter 35, Article 17 of the South Carolina Code of Laws as amended and the amount in controversy is \$100,000.00 or less, the CPOC shall appoint a mediator, otherwise, the mediation shall be conducted by an impartial mediator selected by mutual agreement of the parties, or if the parties cannot so agree, a mediator designated by the American Arbitration Association ("AAA") pursuant to its Construction Industry Mediation Rules. The mediation will be governed by and conducted pursuant to a mediation agreement negotiated by the parties or, if the parties cannot so agree, by procedures established by the mediator.

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4. Without relieving any party from the other requirements of this Article, either party may initiate proceedings in the appropriate forum prior to initiating or completing the procedures required by Sections I above and J 1 if such action is necessary to preserve a claim by avoiding the application of any applicable statutory period of limitation or repose.
- K. The Contractor agrees that any act by the Owner regarding the Contract is not a waiver of either the State's sovereign immunity or the State's immunity under the Eleventh Amendment of the United States Constitution. As used in this paragraph, the phrase "the State" includes any governmental entity transacting business with the Contractor pursuant to the Contract and the South Carolina Budget & Control Board.

ARTICLE 9 - SUSPENSION OR TERMINATION BY OWNER

- A. The Owner may direct the Contractor to suspend the Contractor's performance, in whole or in part, with or without cause, for such period as determined by the Owner at any time and without prior notice to the Contractor.
- B. The Construction Services Delivery Order Sum will be adjusted for increases in cost to the Contractor due to the delay or interruption except that no increase will be granted for delays or interruptions that are, or would have been, the responsibility of the Contractor, or an equitable adjustment is covered under other provisions of the contract.
- C. The Owner may terminate this Contract or any Construction Services Delivery Order under this Contract, in whole or in part, for the convenience of the State with not less than seven (7) days written notice to the Contractor. The Contractor shall be paid for all services acceptably performed up to the date of termination, costs incurred by reason of such termination, and any other adjustments otherwise allowed by the Contract.
 1. Contractor's failure to include an appropriate termination for convenience clause in any subcontract shall not: (i) affect the Owner's right to require the termination of a subcontract, or; (ii) increase the obligation of the Owner beyond what it would have been if the subcontract had contained an appropriate clause.
 2. Upon written consent of the Contractor, the Owner may reinstate the terminated portion of this Contract in whole or in part by amending the notice of termination if it has been determined that: (i) the termination was due to withdrawal of funding by the General Assembly, Governor, or Budget and Control Board or the need to divert project funds to respond to an emergency as defined by Regulation 19-445.2110(B) of the South Carolina Code of Regulations, as amended; (ii) funding for the reinstated portion of the work has been restored; (iii) circumstances clearly indicate a requirement for the terminated work; and (iv) reinstatement of the terminated work is advantageous to the Owner.
- D. The Owner may terminate the Contract if the Contractor:
 1. repeatedly refuses or fails to supply enough properly skilled workers or proper materials, or otherwise fails to prosecute the Work, or any separable part of the Work, with the diligence, resources and skill that will ensure its completion within the time specified in the Contract Documents, including any authorized adjustments;
 2. fails to make payment to Subcontractors for materials or labor in accordance with the Contract Documents and the respective agreements between the Contractor and the Subcontractors;
 3. repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
 4. otherwise is guilty of substantial breach of a provision of the Contract Documents;
 5. fails to commence the work of an approved Construction Services Delivery Order within seven (7) days of receipt of, or as stated on, the approved Construction Services Delivery Order.
- E. If either party fails to substantially perform according to the terms of this Contract, the other party may terminate this Contract upon not less than seven (7) days written notice. The notice of termination shall set forth with specificity the grounds for termination and may, at the sole option of the terminating party, include a stated period of time in which it may cure the alleged breach.
- F. If, after termination for cause, it is determined that the Owner lacked justification to terminate, or that the Contractor's default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Owner.

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ARTICLE 10 - SUSPENSION OR TERMINATION BY CONTRACTOR

- A. The Contractor may suspend its performance under this Contract if the A/E has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents. Prior to the suspension of performance, the Contractor shall give written notice to the Owner, and shall allow the Owner no fewer than twenty-one (21) calendar days to make payment, otherwise the suspension may take effect without further notice by the Contractor.
- B. The Contractor may terminate the Contract, or Construction Services Delivery Order, upon seven (7) days' written notice to the Owner, if work is stopped through no fault of the Contractor, or other persons performing work either directly or indirectly for the Contractor, for a period of time exceeding forty five (45) consecutive calendar days due to a court order or other public authority having jurisdiction; or a National emergency which requires the work to be stopped.

ARTICLE 11 – PROTECTION OF PERSONS AND PROPERTY

- A. The Contractor is responsible for jobsite safety for the protection of persons and property. The Contractor shall comply with all applicable laws, rules and regulations regarding safety including but not limited to Occupational Safety and Health Standards published by Occupational Safety and Health Administration; and U.S. Department of Labor publications or other jurisdictions having authority over the work.
- B. For the duration of the project, the Contractor is to provide and maintain safety equipment as required for the protection of persons and property including but not limited to warning signs; lights; signal devices; barricades; guard rails; fences; and other devices intended for the safety of persons and protection of property.
- C. If during execution of the work, the Contractor encounters material believed to be hazardous, including but not limited to: lead, asbestos or polychlorinated biphenyl (PCB), and that the Contractor has reasonable cause to believe creates a danger of bodily injury or death to persons, or serious losses to real or personal property, then the Contractor shall immediately stop work in the affected area and report the conditions to the Owner and the A/E in writing. Except by written agreement of the Owner and Contractor the Contractor shall not resume work until the hazardous material has been rendered harmless.
- D. The Owner and Contractor hereby agree that this Article shall apply only to hazardous, toxic or radioactive materials or substances subject to the regulations of agencies having jurisdiction, such as, but not limited to, the S C. Department of Health and Environmental Control (SCDHEC), the U.S. Environmental Protection Agency (USEPA) and the U.S. Nuclear Regulatory Commission (USNRC).
- E. Work in the affected area shall be resumed immediately following the occurrence of any of the following events;
 - (1) the Owner causes remedial work to be performed that results in the absence of materials or substances; or
 - (2) the Owner and the Contractor, by written agreement, decide to resume performance of the work; or
 - (3) the work may safely and lawfully proceed, as determined by an appropriate governmental authority or as evidenced by a written report to both the Owner and the Contractor, which is prepared by an environmental engineer reasonably satisfactory to both the Owner and the Contractor.
- F. For the purposes of this Contract, the term "rendered harmless" shall be interpreted to mean that measured levels of verified hazardous, toxic or radioactive materials or substances are less than the applicable standards established by authorities having jurisdiction. In no event, however, shall the Owner have any responsibility for any substance or material that is brought to the project site by the Contractor, any Subcontractor, any material supplier, or any entity for whom any of them is responsible, unless such materials or substances were expressly required by the Construction Services Delivery Order. The Contractor agrees not to use any fill or other materials to be incorporated into the work that are hazardous, toxic, or radioactive, or made up of any items that are hazardous, toxic, or radioactive.

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ARTICLE 12 - INSURANCE AND BONDS

- A. The Contractor shall purchase and maintain insurance to protect against claims that may arise out of the Contractor's operations under the work of this Contract. The limits shall be for not less than the limits set forth in this Article, shall be written on an occurrence basis and shall be in force for the duration of the Contract.
- B. The insurance required by this Article shall be written for not less than limits of liability specified below or required by law, whichever coverage is greater. Coverages shall be written on an occurrence basis and shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

(1) COMMERCIAL GENERAL LIABILITY:

(a)	General Aggregate (per project)	\$1,000,000
(b)	Products/Completed Operations	\$1,000,000
(c)	Personal and Advertising Injury	\$1,000,000
(d)	Each Occurrence	\$1,000,000
(e)	Fire Damage (Any one fire)	\$50,000
(f)	Medical Expense (Any one person)	\$5,000

(2) BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):

(a)	Combined Single Limit	\$1,000,000
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(3) WORKER'S COMPENSATION:

(a)	State Statutory	
(b)	Employers Liability	\$100,000 Per Accident \$500,000 Disease, Policy Limit \$100,000 Disease, Each Employee

In lieu of separate insurance policies for Commercial General Liability, Business Auto Liability, and Employers Liability, the Contractor may provide an umbrella policy meeting or exceeding all coverage requirements set forth in this Article. The umbrella policy limits shall not be less than \$3,000,000.

- C. Prior to commencement of the Work, and thereafter upon replacement of each required policy of insurance, Contractor shall provide to the Owner a written endorsement to the Contractor's general liability insurance policy that:
- names the Owner as an additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations;
 - provides that no material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy shall have effect unless all additional insureds have been given at least ten (10) days prior written notice of cancellation for non-payment of premiums and thirty (30) days prior written notice of cancellation for any other reason; and
 - provides that the Contractor's liability insurance policy shall be primary, with any liability insurance of the Owner as secondary and noncontributory.
- D. Prior to commencement of the Work, and thereafter upon renewal or replacement of each required policy of insurance, Contractor shall provide to the Owner a signed, original certificate of liability insurance (ACORD 25). Consistent with this Article, the certificate shall identify the types of insurance, state the limits of liability for each type of coverage, name the Owner and Consultants as Certificate Holder, provide that the general aggregate limit applies per project, and provide that coverage is written on an occurrence basis. Both the certificates and the endorsements must be received directly from either the Contractor's insurance agent or the insurance company. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, naming the Owner as an additional insured for claims made under the Contractor's completed operations, and otherwise meeting the above requirements, shall be submitted with the final application for payment and thereafter upon renewal or replacement of

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such coverage until the expiration of the time required by this Article. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

- E. A failure by the Owner either (i) to demand a certificate of insurance or written endorsement required by this Article or (ii) to reject a certificate or endorsement on the grounds that it fails to comply with this Article shall not be considered a waiver of Contractor's obligations to obtain the required insurance.
- F. **LOSS OF USE INSURANCE:** The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. To the extent any losses are covered and paid for by such insurance, the Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.
- G. If the Owner requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Contractor shall, if possible, include such insurance, and the cost thereof shall be charged to the Owner by appropriate Construction Services Delivery Order Modification.
- H. Before an exposure to loss may occur, the Contractor shall file with the Owner a copy of each policy that includes insurance coverages required by this Article. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to a Construction Services Delivery Order. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Owner.
- I. The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 14, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent the property insurance provided by the Contractor pursuant to this Article covers and pays for the damage, except such rights as they have to proceeds of such insurance held by the Contractor as fiduciary.
- J. A loss insured under the Contractor's property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Article 12 O.
- K. If required in writing by a party in interest, the Contractor as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Contractor's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Contractor shall deposit in a separate account proceeds so received, which the Contractor shall distribute in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor.
- L. The Contractor as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Contractor's exercise of this power; if such objection is made, the dispute shall be resolved in the manner provided in the contract between the parties in dispute as the method of binding dispute resolution. The Contractor as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with a final order or determination issued by the appropriate authority having jurisdiction over the dispute.
- M. Before commencing any services hereunder, the Contractor shall provide the Owner with Performance and Payment Bonds, if required, each in an amount not less than the Delivery Order Cost as set forth in the Construction Services Delivery Order. The Surety shall have, at a minimum, a "Best Rating" of "A" as stated in the most current publication of "Best's Key Rating Guide, Property-Casualty". In addition, the Surety shall have a minimum "Best Financial Strength Category" of "Class V", and in no case less than five (5) times the contract amount. The Performance Bond shall be written on Form SE-355, "Performance Bond" and the Payment Bond shall be written on Form SE-357, "Labor and Material Payment Bond", and both shall be made payable to the Owner.

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- N. The Performance and Labor and Material Payment Bonds shall:
1. Be issued by a surety company licensed to do business in South Carolina;
 2. Be accompanied by a current Power of Attorney and certified by the attorney-in-fact who executes the bond on the behalf of the surety company; and
 3. Remain in effect for a period not less than one (1) year following the date of Substantial Completion or the time required to resolve any items of incomplete work and the payment of any disputed amounts, whichever time period is longer.
 4. Separate Bonds shall be provided for each separate Construction Services Delivery Order and shall be provided for all Construction Services Delivery Orders exceeding \$50,000 and for lesser amounts as requested by the Owner. The Contractor shall provide Performance and Labor and Material Payment Bonds in the amount of 100% of the amount of the Construction Services Delivery Order for each project to be done under the terms of this Contract.
 5. Notwithstanding the foregoing, any bonds required by this Contract shall meet the requirements of the SC Code of Laws, as amended.
- O. The Contractor shall keep the Surety informed of the progress of the work and, where necessary, obtain the Surety's consent to, or waiver of:
1. notice of changes in the work;
 2. request for reduction or release of retention;
 3. request for final payment; and
 4. any other item required by the Surety.
- P. The Owner may, in the Owner's sole discretion, inform the Surety of the progress of the work and obtain consents as necessary to protect the Owner's rights, interest, privileges, and benefits under and pursuant to any bond issued in connection with the work.

ARTICLE 13 - CORRECTION OF WORK

- A. The Contractor shall promptly and with due diligence, correct work rejected by the A/E or the Owner for failure to conform to the requirements of the Construction Services Delivery Order, whether such defective work is observed before or after Final Completion. The Contractor shall pay for correcting the deficient work including additional testing and inspections and any compensation for A/E services and expenses involved.
- B. If the Contractor fails to carry out the work in accordance with the contract documents, and fails within a seven (7) day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies they may have, proceed to correct such deficiencies. In such case an appropriate change directive shall be issued deducting from payments to the Contractor the reasonable cost of correcting such deficiencies including the Owner's expenses and compensation to the A/E if necessary. In the event the deficiency is significant, and could pose a danger or create additional expense if not corrected immediately, the A/E may issue a written order to stop work on the project or portion thereof until the reason for the stoppage has been remedied.
- C. The Contractor and the Surety remain liable for any excess cost or damages resulting from actions, set forth in this Article.
- D. If the A/E so chooses, work that is not in conformance with the Construction Services Delivery Order may be accepted in lieu of the contractor removing and correcting the deficient work. Such acceptance of deficient work shall not include work that is in violation of any code requirements. An appropriate adjustment, as recommended by the A/E and agreeable to the Owner, shall be made to the Construction Services Delivery Order Cost. Such modification to the Construction Services Delivery Order Cost shall be made by change directive.

ARTICLE 14 - CONSTRUCTION BY OWNER

- A. The Owner reserves the right to perform work with its own forces or award separate contracts for work on the same project as may be awarded by Construction Services Delivery Order under this Contract.
- B. The Contractor agrees to allow access to the site by the Owner's work force or separate contractor(s), and agrees to assist in coordinating the progress of the work with the Owner.
- C. The Owner shall have the responsibility to coordinate the activities of the various contractors working at the project location.

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ARTICLE 15 – SUBCONTRACTORS

If the Contractor engages subcontractors to provide work on a Construction Services Delivery Order, then the Contractor shall include, or cause to be included, in the agreement with those entities, all provisions contained in this Contract and the Construction Services Delivery Order. Sub-contractors and Sub-subcontractors shall be bound by the same provisions as the Contractor and shall preserve and protect the rights of the Owner.

ARTICLE 16 - COMPLETION AND CLOSEOUT

- A. The Contractor shall have completed the unfinished and defective work listed in the "punch list" and notify the A/E of its completion. The A/E will schedule a Final Inspection and require the Contractor to demonstrate that all equipment and systems operate as designed. The Owner may elect to have other persons, firms or agencies participate in the inspections.
- B. Failure of the Contractor to achieve completion within the allowed time shall entitle the Owner to consider the Contractor in breach of the Contract.
- C. If more than one final inspection is required, the Contractor shall reimburse the Owner for all costs associated with the re-inspection.
- D. Final payment shall not be due and all retained funds shall not be released until the Contractor submits the following:
 1. Affidavit of Payment of Debts and Claims;
 2. Consent of Surety to Final Payment.

ARTICLE 17 – MISCELLANEOUS PROVISIONS

- A. Drug-Free Workplace: The Contractor certifies to the Owner that Contractor will provide a Drug-Free Work-place, as required by Title 44, Chapter 107 of the South Carolina Code of Laws, as Amended.
- B. Cancellation After Award: Pursuant to §11-35-1520 of the SC Code of Laws, as amended, and South Carolina Regulation 19-445.2085, this Contract or any Construction Services Delivery Order may be canceled after award, but prior to issuance of the Notice to Proceed. In such event, the Contractor shall recover, as its sole remedy, its reasonable Delivery Order Proposal preparation costs.
- C. The Contractor and Owner each bind themselves, their partners, directors, officers, successors, executors, administrators, assigns and legal representatives in respect to all provisions of this Contract. Neither party shall assign, sublet or transfer their interest in this Contract without the written consent of the other party.
- D. This Contract represents the entire and integrated agreement between the Owner and Contractor. It supersedes any and all prior and contemporaneous communications, representations and agreements, whether written or oral relating to the subject matter of this Contract
- E. Nothing in this Contract shall be construed to give any rights, contractual relationship or benefit to a third party against either the Owner or the Contractor.
- F. Nothing in this Contract shall prevent the Contractor from employing any independent consultant, associate, or subcontractor to assist in the Services.
- G. Unless otherwise included in the Contract, nothing shall require the Contractor to discover, handle, remove, or dispose of any hazardous or toxic materials in any form at the project site.
- H. PRICING DATA AND AUDIT:
 1. Cost or Pricing Data - Upon request of the Owner or Architect, Contractor shall submit cost or pricing data prior to execution of a Modification which exceeds \$100,000. Contractor shall certify that, to the best of its knowledge and belief, the cost or pricing data submitted is accurate, complete, and current as of a mutually determined specified date prior to the date of pricing the Modification. Contractor's price, including profit, shall be adjusted to exclude any significant sums by which such price was increased because Contractor furnished cost or pricing data that was inaccurate, incomplete, or not current as of the date specified by the parties. Notwithstanding emergencies such adjustments may be made after final payment to the Contractor.

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2. Cost or pricing data means all facts that, as of the date specified by the parties, prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Cost or pricing data are factual, not judgmental; and are verifiable. While they do not indicate the accuracy of the prospective contractor's judgment about estimated future costs or projections, they do include the data forming the basis for that judgment. Cost or pricing data are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred.
 3. Records Retention - the term "records" means any books or records that relate to cost or pricing data that Contractor is required to submit pursuant to Section H 1. Contractor shall maintain records for three years from the date of final payment, or longer if requested by the chief procurement officer. The Owner may audit Contractor's records at reasonable times and places.
- I. **ILLEGAL IMMIGRATION:** Contractor certifies and agrees that it will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina Code of Laws and agrees to provide to the State upon request any documentation required to establish either: (a) that Title 8, Chapter 14 is inapplicable both to Contractor and its subcontractors or sub-subcontractors; or (b) that Contractor and its subcontractors or sub-subcontractors are in compliance with Title 8, Chapter 14. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both." Contractor agrees to include in any contracts with its subcontractors language requiring its subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 8, Chapter 14. (An overview is available at www.procurement.sc.gov).
 - J. **Economic Conflict of Interest:** A contractor shall not have or exercise any official responsibility regarding a public contract in which the contractor, or a business with which he is associated, has an economic interest. A person working for contractor shall not have or exercise any official responsibility regarding a public contract in which the person, an individual with whom he is associated, or his family members have an economic interest. If contractor is asked by any person to violate, or does violate, either of these restrictions, contractor shall immediately communicate such information to the procurement officer. The state may rescind, and recover any amount expended as a result of, any action taken or contract entered in violation of this provision. The terms "business with which he is associated," "economic interest," "family member," "immediate family," "individual with whom he is associated," "official responsibility" and "person" have the meanings provided in Section 8-13-100.
 - K. **FALSE CLAIMS:** According to the S.C. Code of Laws § 16-13-240, "a person who by false pretense or representation obtains the signature of a person to a written instrument or obtains from another person any chattel, money, valuable security, or other property, real or personal, with intent to cheat and defraud a person of that property is guilty..." of a crime.
 - L. **NON-INDEMNIFICATION:** Any term or condition is void to the extent it requires the State to indemnify anyone. It is unlawful for a person charged with disbursements of state funds appropriated by the General Assembly to exceed the amounts and purposes stated in the appropriations. (§ 11-9-20) It is unlawful for an authorized public officer to enter into a contract for a purpose in which the sum is in excess of the amount appropriated for that purpose. It is unlawful for an authorized public officer to divert or appropriate the funds arising from any tax levied and collected for any one fiscal year to the payment of an indebtedness contracted or incurred for a previous year. (§ 11-1-40)
 - M. **INTELLECTUAL PROPERTY INDEMNITY:** Without limitation and notwithstanding any other provision in this agreement, Contractor shall, upon receipt of notification, defend and indemnify the Indemnities against all actions, proceedings or claims of any nature (and for all damages, settlement payments, attorneys' fees, costs, expenses, losses or liabilities attributable thereto) by any third party asserting or involving Intellectual Property (IP) rights related to the Instruments of Service. Contractor's obligations under this paragraph do not apply to a claim to the extent (i) that the claim is caused by Contractor's compliance with a detailed, exact statement of particulars (such as a statement prescribing materials, dimensions, and quality of work) furnished by the State unless Contractor knew its compliance with the State's specifications would infringe an IP right, or

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(ii) that the claim is caused by Contractor's compliance with a detailed, exact statement of particulars furnished by the State if the State knowingly relied on a third party's IP right to develop the specifications provided to Contractor and failed to identify such product to Contractor. State must reasonably cooperate with Contractor's defense of such claims or suits and, subject to Title 1, Chapter 7 of the South Carolina Code of Laws, may allow Contractor sole control of the defense, so long as the defense is diligently and capably prosecuted. State may participate in the defense of any action. Contractor's obligations under this clause shall survive the termination, cancellation, rejection, or expiration of this Agreement. "IP rights" means any rights protected by the laws governing patents, copyrights, trademarks, trade secrets, or any other proprietary rights. As used in this paragraph, "Indemnitees" means the State (including its instrumentalities, agencies, departments, boards, and political subdivisions), the contractor, the subcontractors at all tiers, and the officers, agents and employees of all the forgoing.

ARTICLE 18 - GOVERNING LAW

- A. This Contract shall comply with South Carolina Law §11-35-3310 and related Statutes.
- B. As required by §10-1-180 of the SC Code of Laws, as amended, the Office of State Engineer shall determine the enforcement and interpretation of all the applicable codes and referenced standards on state buildings.
- C. Contractor shall refer any questions, comments or directives from local officials to the Owner and the Office of State Engineer for resolution.
- D. If any provision or any part of a provision of the Contract Documents shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable Legal Requirements, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Contract Documents, which shall remain in full force and effect as if the unenforceable provision or part were deleted.

ARTICLE 19 – OTHER PROVISIONS

- A. _____

**SE-330 -- LUMP SUM BID
BID FORM**

Bidders shall submit bids on only Bid Form SE-330.

BID SUBMITTED BY: _____
(Bidder's Name)

BID SUBMITTED TO: _____
(Owner's Name)

FOR PROJECT: PROJECT NAME Indefinite Delivery of Roofing Contracting Services
PROJECT NUMBER H27-D170-CA

OFFER

§ 1. In response to the Invitation for Construction Bids and in compliance with the Instructions to Bidders for the above-named Project, the undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with the Owner on the terms included in the Bidding Documents, and to perform all Work as specified or indicated in the Bidding Documents, for the prices and within the time frames indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

§ 2. Pursuant to Section 11-32-3030(1) of the SC Code of Laws, as amended, Bidder has submitted Bid Security as follows in the amount and form required by the Bidding Documents:

- Bid Bond with Power of Attorney
 - Electronic Bid Bond
 - Cashier's Check
- (Bidder check one)

§ 3. Bidder acknowledges the receipt of the following Addenda to the Bidding Documents and has incorporated the effects of said Addenda into this Bid:

ADDENDUM No: _____

§ 4. Bidder accepts all terms and conditions of the Invitation for Bids, including, without limitation, those dealing with the disposition of Bid Security. Bidder agrees that this Bid, including all Bid Alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 60 Days following the Bid Date, or for such longer period of time that Bidder may agree to in writing upon request of the Owner.

§ 5. Bidder herewith offers to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the following items of construction work:

§ 6.1 **BASE BID WORK** (as indicated in the Bidding Documents and generally described as follows): Remove existing BUR coal tar with gravel surface; BUR modified bitment surface coal tar; and ballasted EPOM single ply roof assemblies on the various roof areas.

_____, which sum is hereafter called the Base Bid.
(Bidder - insert Base Bid Amount on line above)

BASE BID AGREEMENT

1. Portion of Base Bid as defined in Technical Specifications and Drawings:

LS \$ _____

2. Portion of Base Bid as defined in Unit Prices (Page BF-1C) and mentioned in the Scope of Work:

LS \$ _____

3. Base Bid (Total of Lines 1 and 2 above): LS \$ _____

which sum is hereinafter called the **BASE BID** and insert in paragraph 6.1, page BF-1.

UNIT PRICES TO BE INCLUDED IN BASE BID

It is anticipated the following work items and amounts will be required on this project. These items and amounts are not included in the Technical Specifications and Drawings documents. These work items shall conform to referenced standards in the Technical Specifications. If the required quantities of the items listed below are increased or decreased by Change Order, the adjustment unit prices set forth below shall apply to such increased or decreased quantities.

- 1. Remove and dispose of damaged or disintegrated vermiculite lightweight concrete roof deck and replace with new portland cement concrete to match existing.

500 SF @ \$ _____/SF = \$ _____(LS)

- 2. Prepare surface of existing concrete deck to receive installation of Zonopatch to fill low, ponding areas to receive new roof assembly.

400 SF @ \$ _____/SF = \$ _____(LS)

- 3. Remove and dispose of damaged or deteriorated galvanized steel roof deck and replace with new 1-1/2 inches 22 gage galvanized steel roof deck.

200 SF @ \$ _____/SF = \$ _____(LS)

- 4. Clean, wire brush and prime rusted or deteriorated galvanized steel roof deck and apply two coats of Sherwin Williams ChemKromix.

300 SF @ \$ _____/SF = \$ _____(LS)

- 5. Remove and dispose of damaged or deteriorated wood nailers, wood blocking and replace with new treated wood blocking to match existing.

360 BF @ \$ _____/BF = \$ _____(LS)

Total Unit Prices to be included in BASE BID
(Enter "Total Unit Prices" amount on line 2, Page BF-1B) = \$ _____(LS)

**SE-330 – LUMP SUM BID
BID FORM**

§ 8. LIST OF MANUFACTURERS, MATERIAL SUPPLIERS, AND SUBCONTRACTORS OTHER THAN SUBCONTRACTORS LISTED IN SECTION 7 ABOVE (FOR INFORMATION ONLY): Pursuant to instructions in the Invitation for Bids, if any, Bidder will provide to Owner upon the Owner’s request and within 24 hours of such request, a listing of manufacturers, material suppliers, and subcontractors, other than those listed in Section 7 above, that Bidder intends to use on the project. Bidder acknowledges and agrees that this list is provided for purposes of determining responsibility and not pursuant to the subcontractor listing requirements of SC Code Ann § 11-35-3020(b)(i).

§ 9. TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES

a. **CONTRACT TIME:** Bidder agrees that the Date of Commencement of the Work shall be established in a Notice to Proceed to be issued by the Owner. Bidder agrees to substantially complete the Work within 90 calendar days from the Date of Commencement, subject to adjustments as provided in the Contract Documents.

b. **LIQUIDATED DAMAGES:** Bidder further agrees that from the compensation to be paid, the Owner shall retain as Liquidated Damages the sum of \$500.00 for each calendar day the actual construction time required to achieve Substantial Completion exceeds the specified or adjusted time for Substantial Completion as provided in the Contract Documents. This sum is intended by the parties as the predetermined measure of compensation for actual damages, not as a penalty for nonperformance.

§ 10. AGREEMENTS

- a. Bidder agrees that this bid is subject to the requirements of the law of the State of South Carolina.
- b. Bidder agrees that at any time prior to the issuance of the Notice to Proceed for this Project, this Project may be canceled for the convenience of, and without cost to, the State.
- c. Bidder agrees that neither the State of South Carolina nor any of its agencies, employees or agents shall be responsible for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the Project canceled for any reason prior to the issuance of the Notice to Proceed.

§ 11. ELECTRONIC BID BOND

By signing below, the Principal is affirming that the identified electronic bid bond has been executed and that the Principal and Surety are firmly bound unto the State of South Carolina under the terms and conditions of the AIA Document A310, Bid Bond, included in the Bidding Documents.

Electronic Bid Bond Number: _____

Signature and Title: _____

**SE-330 – LUMP SUM BID
BID FORM**

BIDDER'S TAXPAYER IDENTIFICATION

FEDERAL EMPLOYER'S IDENTIFICATION NUMBER: _____

OR

SOCIAL SECURITY NUMBER: _____

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATIONS

Classification(s) & Limits: _____

Subclassification(s) & Limits: _____

SC Contractor's License Number(s): _____

BY SIGNING THIS BID, THE PERSON SIGNING REAFFIRMS ALL REPRESENTATIONS AND CERTIFICATIONS MADE BY BOTH THE PERSON SIGNING AND THE BIDDER, INCLUDING WITHOUT LIMITATION, THOSE APPEARING IN ARTICLE 2 OF THE INSTRUCTIONS TO BIDDER. THE INVITATION FOR BIDS, AS DEFINED IN THE INSTRUCTIONS TO BIDDERS, IS EXPRESSLY INCORPORATE BY REFERENCE.

SIGNATURE

BIDDER'S LEGAL NAME: _____

ADDRESS: _____

BY: _____
(Signature)

DATE: _____

TITLE: _____

TELEPHONE: _____

EMAIL: _____



Project Name: _____
Contractor Subspecialty _____
State Project No.: _____ CP No.: _____
USC Project Coordinator: _____ Telephone No.: _____

Scope of Work:

Delivery Order Documents Available: Yes No
May Be Obtained From: _____

Mandatory Pre-Quote Conference: Yes No
Date: _____ Time: _____ Location: _____

RFQ Closing Date: _____ Time: _____
Location: _____ Attention: _____

NOTE: If quote exceeds \$50,000, performance bonds and payment bonds will be required.

QUOTE FORM

Quote Submitted By: _____

Quote is submitted in accordance with IDC Contract _____ dated _____

Base Quote 1: \$ _____

Base Quote 2: \$ _____

Unit Pricing for Additional (if requested): \$ _____

Base Schedule: _____
Start Date End Date

At this time, the above mentioned company chooses not to bid.

ADDENDA (If Applicable) - The above signed acknowledges the receipt of the following addenda for this RFQ:

Addendum #1 Addendum #2 Addendum #3 Addendum #4

This Quote is hereby submitted on behalf of the offerer named above

BY: _____
(Signature of Offerer's Representative) (Print or Type Name of Offerer's Representative)

Date: _____

****Quotes that are received via fax will not be accepted****

Performance Bond

KNOW ALL MEN BY THESE PRESENTS, that *(Insert full name or legal title and address of Contractor)*

Name: _____
Address: _____

hereinafter referred to as "Contractor", and *(Insert full name and address of principal place of business of Surety)*

Name: _____
Address: _____

hereinafter called the "surety", are jointly and severally held and firmly bound unto *(Insert full name and address of Agency)*

Name: University of South Carolina
Address: 743 Greene Street
Columbia, South Carolina 29208

hereinafter referred to as "Agency", or its successors or assigns, the sum of _____ (\$ _____), being the sum of the Bond to which payment to be well and truly made, the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ entered into a contract with Agency to construct

State Project Name: IDC Roofing Contracting Services
State Project Number: H27-D170-CA
Brief Description of Awarded Work, as found on the SE-330, Bid Form: Remove existing BUR coal tar with gravel surface; BUR modified bitment surface coal tar; and ballasted EPOM single ply roof assemblies on the various roof areas

in accordance with Drawings and Specifications prepared by *(Insert full name and address of A/E)*

Name: Floyd Abrams Company
Address: 3111 Devine Street
Columbia, SC 29260

which agreement is by reference made a part hereof, and is hereinafter referred to as the Contract.

IN WITNESS WHEREOF, Surety and Contractor, intending to be legally bound hereby, subject to the terms stated herein, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

DATED this _____ day of _____, 2_____, BOND NUMBER _____
(shall be no earlier than Date of Contract)

CONTRACTOR

SURETY

By: _____
(Seal)

By: _____
(Seal)

Print Name: _____

Print Name: _____

Print Title: _____

Print Title: _____
(Attach Power of Attorney)

Witness: _____

Witness: _____

(Additional Signatures, if any, appear on attached page)

Performance Bond**Performance Bond****NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT:**

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency for the full and faithful performance of the contract, which is incorporated herein by reference
2. If the Contractor performs the contract, the Surety and the Contractor have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.
3. The Surety's obligation under this Bond shall arise after:
 - 3.1 The Agency has notified the Contractor and the Surety at the address described in paragraph 10 below, that the Agency is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If the Agency, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the Agency's right, if any, subsequently to declare a Contractor Default; or
 - 3.2 The Agency has declared a Contractor Default and formally terminated the Contractor's right to complete the Contract.
4. The Surety shall, within 15 days after receipt of notice of the Agency's declaration of a Contractor Default, and at the Surety's sole expense, take one of the following actions:
 - 4.1 Arrange for the Contractor, with consent of the Agency, to perform and complete the Contract; or
 - 4.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Agency for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the Agency and the contractor selected with the Agency's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the Agency the amount of damages as described in paragraph 7 in excess of the Balance of the Contract Sum incurred by the Agency resulting from the Contractor Default; or
 - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and:
 - 4.4.1 After investigation, determine the amount for which it may be liable to the Agency and, within 60 days of waiving its rights under this paragraph, tender payment thereof to the Agency; or
 - 4.4.2 Deny liability in whole or in part and notify the Agency, citing the reasons therefore.
5. Provided Surety has proceeded under paragraphs 4.1, 4.2, or 4.3, the Agency shall pay the Balance of the Contract Sum to either:
 - 5.1 Surety in accordance with the terms of the Contract; or
 - 5.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.
 - 5.3 The balance of the Contract Sum due either the Surety or another contractor shall be reduced by the amount of damages as described in paragraph 7.
6. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond 15 days after receipt of written notice from the Agency to the Surety demanding that the Surety perform its obligations under this Bond, and the Agency shall be entitled to enforce any remedy available to the Agency.
 - 6.1 If the Surety proceeds as provided in paragraph 4.4, and the Agency refuses the payment tendered or the Surety has denied liability, in whole or in part, then without further notice the Agency shall be entitled to enforce any remedy available to the Agency.
 - 6.2 Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the Dispute Resolution process defined in the Contract Documents and the laws of the State of South Carolina.
7. After the Agency has terminated the Contractor's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Agency shall be those of the Contractor under the Contract, and the responsibilities of the Agency to the Surety shall those of the Agency under the Contract. To a limit of the amount of this Bond, but subject to commitment by the Agency of the Balance of the Contract Sum to mitigation of costs and damages on the Contract, the Surety is obligated to the Agency without duplication for:
 - 7.1 The responsibilities of the Contractor for correction of defective Work and completion of the Contract; and
 - 7.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and
 - 7.3 Damages awarded pursuant to the Dispute Resolution Provisions of the Contract. Surety may join in any Dispute Resolution proceeding brought under the Contract and shall be bound by the results thereof; and
 - 7.4 Liquidated Damages, or if no Liquidated Damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. The Surety shall not be liable to the Agency or others for obligations of the Contractor that are unrelated to the Contract, and the Balance of the Contract Sum shall not be reduced or set-off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Agency or its heirs, executors, administrators, or successors.
9. The Surety hereby waives notice of any change, including changes of time, to the contract or to related subcontracts, purchase orders and other obligations.
10. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the address shown on the signature page.
11. Definitions
 - 11.1 Balance of the Contract Sum: The total amount payable by the Agency to the Contractor under the Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts to be received by the Agency in settlement of insurance or other Claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.
 - 11.2 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform the Contract or otherwise to comply with the terms of the Contract.

**SE-357
Labor and Material Payment Bond**

KNOW ALL MEN BY THESE PRESENTS, that *(Insert full name or legal title and address of Contractor)*

Name: _____
Address: _____

hereinafter referred to as "Contractor", and *(Insert full name and address of principal place of business of Surety)*

Name: _____
Address: _____

hereinafter called the "surety", are jointly and severally held and firmly bound unto *(Insert full name and address of Agency)*

Name: University of South Carolina
Address: 743 Greene Street
Columbia, South Carolina 29208

hereinafter referred to as "Agency", or its successors or assigns, the sum of _____ (\$ _____), being the sum of the Bond to which payment to be well and truly made, the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ entered into a contract with Agency to construct

Project Name: IDC Roofing Contracting Services
Project Number: H27-D170-CA
Brief Description of Awarded Work, as found on the SE-330, Bid Form: Remove existing BUR coal tar with gravel surface; BUR modified bitment surface coal tar; and ballasted EPOM single ply roof assemblies on the various roof areas

in accordance with Drawings and Specifications prepared by *(Insert full name and address of A/E)*

Name: Floyd Abrams Company
Address: 3111 Devine Street
Columbia, SC 29260

which agreement is by reference made a part hereof, and is hereinafter referred to as the Contract.

IN WITNESS WHEREOF, Surety and Contractor, intending to be legally bound hereby, subject to the terms stated herein, do each cause this Labor and Material Payment Bond to be duly executed on its behalf by its authorized officer, agent or representative.

DATED this _____ day of _____, 2 BOND NUMBER _____
(shall be no earlier than Date of Contract)

CONTRACTOR

SURETY

By: _____
(Seal)

By: _____
(Seal)

Print Name: _____

Print Name: _____

Print Title: _____

Print Title: _____
(Attach Power of Attorney)

Witness: _____

Witness: _____

(Additional Signatures, if any, appear on attached page)

SE-357**Labor and Material Payment Bond****NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT:**

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency to pay for all labor, materials and equipment required for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to the Agency, this obligation shall be null and void if the Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and
 - 2.2 Defends, indemnifies and holds harmless the Agency from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract.
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. With respect to Claimants, and subject to the provisions of Title 29, Chapter 5 and the provisions of §11-35-3030(2)(c) of the SC Code of Laws, as amended, the Surety's obligation under this Bond shall arise as follows:
 - 4.1 Every person who has furnished labor, material or rental equipment to the Contractor or its subcontractors for the work specified in the Contract, and who has not been paid in full therefore before the expiration of a period of ninety (90) days after the date on which the last of the labor was done or performed by him or material or rental equipment was furnished or supplied by him for which such claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of such suit and to prosecute such action for the sum or sums justly due him.
 - 4.2 A remote claimant shall have a right of action on the payment bond upon giving written notice by certified or registered mail to the Contractor within ninety (90) days from the date on which such person did or performed the last of the labor or furnished or supplied the last of the material or rental equipment upon which such claim is made.
 - 4.3 Every suit instituted upon a payment bond shall be brought in a court of competent jurisdiction for the county or circuit in which the construction contract was to be performed, but no such suit shall be commenced after the expiration of one year after the day on which the last of the labor was performed or material or rental equipment was supplied by the person bringing suit.
5. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 5.1 Send an answer to the Claimant, with a copy to the Agency, within sixty (60) days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 5.2 Pay or arrange for payment of any undisputed amounts.
 - 5.3 The Surety's failure to discharge its obligations under this paragraph 5 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this paragraph 5, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.
6. Amounts owed by the Agency to the Contractor under the

Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the Contractor furnishing and the Agency accepting this Bond, they agree that all funds earned by the contractor in the performance of the Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Agency's prior right to use the funds for the completion of the Work.

7. The Surety shall not be liable to the Agency, Claimants or others for obligations of the Contractor that are unrelated to the Contract. The Agency shall not be liable for payment of any costs or expenses of any claimant under this bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

9. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the Agency or the contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

10. By the Contractor furnishing and the Agency accepting this Bond, they agree that this Bond has been furnished to comply with the statutory requirements of the South Carolina Code of Laws, as amended, and further, that any provision in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

11. Upon request of any person or entity appearing to be a potential beneficiary of this bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

12. Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the laws of the State of South Carolina.

13. DEFINITIONS

13.1 Claimant: An individual or entity having a direct contract with the Contractor or with a Subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the Contractor and the Contractor's Subcontractors, and all other items for which a mechanic's lien might otherwise be asserted.

13.2 Remote Claimant: A person having a direct contractual relationship with a subcontractor of the Contractor or subcontractor, but no contractual relationship expressed or implied with the Contractor.

13.3 Contract: The agreement between the Agency and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

Construction Services Delivery Order Modification

AGENCY: University of South Carolina
Address: 743 Greene Street, Columbia, SC 29208

CONTRACTOR: _____
Address: _____

Project Name: _____
Agency IDC Contract No.: _____
Delivery Order Modification No.: _____

State Project No.: _____
Agency Delivery Order No.: _____

COST AND SCHEDULE INFORMATION

SCHEDULE

	<u>DELIVERY ORDER</u>	<u>CONTRACT</u>	
Maximum Total Amount, this IDC:	N/A		Date of Commencement: _____
Maximum Total Amount, Delivery Orders:	N/A		Initial Days Allowed: _____
Current Amount, this Delivery Order:		N/A	Additional Days Allowed: _____
Additional Amount, this Modification:		N/A	Revised Date of Substantial Completion: _____
Adjusted Amount, this Delivery Order:		N/A	
Total Authorized to date, all other Delivery Orders:			
Total Authorized to date <i>:(including this modification):</i>			
Balance Remaining for this IDC:	N/A		

Description of Modification Scope: *(attach Contractor's Proposal* _____

Other Agency Information

List of Modification Documents: *(refer to attachments as necessary)* _____

The Agency and the Contractor hereby agree, as indicated by the signatures below, to the revised scope of work identified in the Modification Documents listed above, and to the Contractor's Cost Proposal dated the ____ day of ____, 20____, and this Delivery Order Modification shall be assigned to the Indefinite Delivery

AGENCY:

CONTRACTOR:

BY: _____
(Signature of Representative)

BY: _____
(Signature of Representative)

Print Name: _____

Print Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Construction Services Delivery Order

AGENCY: University of South Carolina
Address: 743 Greene Street, Columbia, SC 29208

CONTRACTOR: _____
Address: _____

Project Name: _____
Agency IDC Contract No.: _____

State Project No.: _____
Agency Delivery Order No.: _____

COST AND SCHEDULE INFORMATION

SCHEDULE

	<u>DELIVERY ORDER</u>	<u>CONTRACT</u>
Maximum Total Amount, this IDC:	N/A	
Maximum Total Amount, Delivery Order:	N/A	
Amount, this Delivery Order:		N/A
Total Amount Previous Delivery Orders:	N/A	
Total Amount all Delivery Orders (including current order)		
Balance Remaining for this IDC:		

Date of Commencement: _____
Days Allowed: _____
Date of Substantial Completion: _____

Other Agency Information:

Description of Delivery Order Scope: (attach Contractor's Proposal _____

List of Delivery Order Documents: (refer to attachments as necessary) _____

The Agency and the Contractor hereby agree, as indicated by the signatures below, to the scope of work identified in the Contract Documents listed above, and to the Contractor's Cost Proposal dated the _____ day of _____, 20____, and this Delivery Order shall be assigned to the Indefinite Delivery Contract identified above

NOTICE TO PROCEED is hereby given on this the _____ day of _____, 20____. The Dates of Commencement and Substantial Completion are as noted above and shall be used for determining completion and the applicability of Liquidated Damages. Liquidated Damages in the amount of _____ per day will be assessed for failure to complete the Work by the agreed upon date of completion. Failure to commence actual work on this Delivery Order within seven (7) days from the Date of Commencement will entitle the Agency to consider the Contractor non-responsible. In this event, the Agency may withdraw this Delivery Order and terminate the Contract in accordance with the Contract Documents.

AGENCY:

CONTRACTOR:

BY: _____
(Signature of Representative)

BY: _____
(Signature of Representative)

Print Name: _____

Print Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

COMPLETION CERTIFICATION BY AGENCY:

Actual Completion Date:

Liquidated Damages Assessed:

(Signature of Agency Representative)
Title: _____

Date:

USC SUPPLEMENTAL GENERAL CONDITIONS
FOR CONSTRUCTION PROJECTS

1. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies and stairs. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the building to the work area. Providing safe, accessible, plywood pedestrian ways around construction may be required if a suitable alternative route is not available.
2. Fraternalization between Contractor's employees and USC students, faculty or staff is strictly prohibited-zero tolerance!
3. USC will not tolerate rude, abusive or degrading behavior on the job site. Heckling and cat-calling directed toward students, faculty or staff or any other person on USC property is strictly prohibited. Any contractor whose employees violate this requirement will be assessed a fine of up to \$500 per violation.
4. Contractor's employees must adhere to the University's policy of maintaining a drug-free and smoke-free/tobacco free workplace.
5. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.
6. A welding permit must be issued by the University Fire Marshall before any welding can begin inside a building. Project Manager will coordinate.
7. Contractor must notify the University immediately upon the discovery of suspect material such as those potentially containing asbestos or other such hazardous materials. These materials **must not** be disturbed until approved by the USC Project Manager.
8. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the Contractor's work vehicles. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site that are not regular or authorized parking lots. Personal vehicles must be parked in the perimeter parking lots. Parking permits can be obtained at the USC Parking Office located in the Pendleton Street parking garage. The lay down area will be clearly identified to the contractor by the PM, with a sketch or drawing provided to Parking. In turn, the contractor will mark off this area with a sign containing the project name, PM name, Contractor name and contact number, and end date. Where this area is subject to foot traffic, protective barriers will be provided as specified by the PM. The area will be maintained in a neat and orderly fashion. Vehicles parked in the lay down area (or designated parking areas) will be clearly marked or display a CPC furnished placard for identification.

9. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.
10. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.
11. For all projects over \$100,000, including IDC's, an SE-395, Contractor Performance Evaluation, will be completed by the USC Project Manager and reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed and a Construction Performance rating will be established.
12. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied at least one times per week. Construction waste must not be placed in University dumpsters. THE CONSTRUCTION SITE MUST BE THOROUGHLY CLEANED WITH ALL TRASH PICKED UP AND PROPERLY DISPOSED OF ON A DAILY BASIS AND THE SITE MUST BE LEFT IN A SAFE AND SANITARY CONDITION EACH DAY. THE UNIVERSITY WILL INSPECT JOB SITES REGULARLY AND WILL FINE ANY CONTRACTOR FOUND TO BE IN VIOLATION OF THIS REQUIREMENT AN AMOUNT OF UP TO \$1,000 PER VIOLATION.
13. **Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until this is completed.**
14. The contractor will comply with all regulations set forth by OSHA and SCDHEC. Contractor must also adhere to USC's internal policies and procedures (available by request). As requested, the contractor will submit all Safety Programs and Certificates of Insurance to the University for review.
15. Tree protection fencing is required to protect existing trees and other landscape features to be preserved within a construction area. The limits of this fence will be evaluated for each situation with the consultant, USC Arborist and USC Project Manager. The tree protection fence shall be 5' high chain link fence unless otherwise approved by USC Project Manager. No entry or materials storage will be allowed inside the tree protection zone. A 4" layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone.
16. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following measures shall be taken: For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over areas impacted. For single loads over 9,000 lbs., two layers of 3/4" plywood is required.
17. For projects requiring heavy loads to cross walks tree root zones or lawns. A construction entry road consisting of 10' X 16' oak logging mats on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep

matting structurally functional.

18. Any damage to existing landscaping (including lawn areas) will be remediated before final payment is made.
19. Orange safety fence to be provided by the contractor. (USC Arborist, Kevin Curtis may be contacted at 777-0033 or 315-0319)

Campus Vehicle Expectations

1. All motorized vehicles on the University campus are expected to travel and park on roadways and/or in parking stalls.
2. All motorized vehicle traffic on USC walkways must first receive the Landscape Manager=s authorization. Violators may be subject to fines and penalties.
3. All motorized vehicles that leak or drip liquids are prohibited from traveling or parking on walks or landscaped areas.
4. Contractors, vendors, and delivery personnel are required to obtain prior parking authorization before parking in a designated space. Violators may be subject to fines and/or penalties. See Item 10 below.
5. Drivers of equipment or motor vehicles that damage university hardscape or landscape will be held personally responsible for damages and restoration expense.
6. Vehicle drivers who park on landscape or drives must be able to produce written evidence of need or emergency requiring parking on same.
7. All vehicles parked on landscape, hardscape, or in the process of service delivery, must display adequate safety devices, i.e. flashing lights, cones, signage, etc.
8. All drivers of equipment and vehicles will be respectful of University landscape, equipment, structures, fixtures and signage.
9. All incidents of property damage will be reported to Parking Services or the Work Management Center.
10. Parking on campus is restricted to spaces designated by Parking Services at the beginning of the project. Once the project manager and contractor agree on how many spaces are needed, the project manager will obtain a placard for each vehicle. This placard must be hung from the mirror of the vehicle, otherwise a ticket will be issued and these tickets cannot be “fixed”. Parking spaces are restricted to work vehicles only; no personal vehicles.

Project Name: Indefinite Delivery of Roofing Contracting Services
Project Number: H27-D170-CA
University of South Carolina

CONTRACTOR'S ONE YEAR GUARANTEE

STATE OF _____

COUNTY OF _____

WE _____
as General Contractor on the above-named project, do hereby guarantee that all work executed under the requirements of the Contract Documents shall be free from defects due to faulty materials and /or workmanship for a period of one (1) year from date of acceptance of the work by the Owner and/or Architect/Engineer; and hereby agree to remedy defects due to faulty materials and/or workmanship, and pay for any damage resulting wherefrom, at no cost to the Owner, provided; however, that the following are excluded from this guarantee;

Defects or failures resulting from abuse by Owner.

Damage caused by fire, tornado, hail, hurricane, acts of God, wars, riots, or civil commotion.

[Name of Contracting Firm]

*By _____

Title _____

*Must be executed by an office of the Contracting Firm.

SWORN TO before me this
_____ day of _____, 2____ (seal)

_____ State

My commission expires _____

DIVISION 1
GENERAL REQUIREMENTS

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK INCLUDED:

- 1.1.1 Contractor shall inspect, test all existing roof drainage systems to ensure free-flowing, unclogged condition. Any clogged or partially clogged roof drainage system shall be reported to the consultant for Owner's maintenance department's response.
- 1.1.2 Remove and dispose of existing gravel surface coal tar BUR on Roof Areas A, B, C, D and G.
- 1.1.3 Remove and dispose of existing modified bitumen surface coal tar BUR on Roof Areas E.
- 1.1.4 Remove and dispose of existing ballasted EPDM single ply assembly on Roof Area F.
- 1.1.5 Inspect concrete or metal roof deck to ensure structural integrity prior to installation of new roof assembly.
- 1.1.6 Contractor shall prepare low, ponding areas of roof deck to receive installation of Zono Patch to eliminate these depressions.
- 1.1.7 Remove and dispose of out of service roof penetrations.
- 1.1.8 Remove and dispose of existing membrane flashing.
- 1.1.9 Remove and dispose of existing curb flashing, membrane and sheet metal flashing.
- 1.1.10 Remove and dispose of all sheet metal coping cap, Roof Areas A and F.
- 1.1.11 Remove and dispose of damaged or deteriorated concrete roof deck and replace with new concrete deck to match existing. (Unit Price)
- 1.1.12 Remove and dispose of damaged or deteriorated metal roof deck and replace with new galvanized steel metal roof deck to match existing. (Unit Price)
- 1.1.13 Remove and dispose of damaged or deteriorated wood blocking, nailers and replace with new treated wood blocking, nailers to match existing. (Unit Price)
- 1.1.14 Remove and dispose of existing sheet metal counterflashing, etc.
- 1.1.15 Remove and dispose of out of service roof hatch on Roof Area E.

- 1.1.16 Fabricate and install new galvanized steel pans to close roof deck openings at out of service penetrations.
- 1.1.17 Over prepared concrete roof deck, apply asphalt primer full strength.
- 1.1.18 Over primed concrete roof deck, install reinforced base sheet in solid application of hot asphalt.
- 1.1.19 Install over base sheet two ply (Type IV) felt temporary roof in solid mopping of "no smell" hot asphalt.
- 1.1.20 Glaze coat temporary roof with "no smell" asphalt prior to installation of tapered insulation.
- 1.1.21 Fabricate new stainless steel parapet scupper drains mechanically fastened to wood blocking and masonry parapet.
- 1.1.22 For out-of-service roof hatch, install new steel angle, attached to structural frame to support new galvanized steel roof deck. Mechanically fasten 5/8" Securelock Type X to roof deck with Perlite insulation fill to match concrete deck.
- 1.1.23 Install new Perlite roof drain sumps, 4 feet x 4 feet x ½ inch slope. For roof drains, install 4-lb. sheet lead flashing, 3 feet x 3 feet.
- 1.1.24 Add wood blocking as required on roof curbs to provide eight (8) inches minimum flashing height.
- 1.1.25 Install polyisocyanurate fill insulation solid mopped to temporary roof or base sheet.
- 1.1.26 Install new tapered perlite roof insulation to provide 1/8 inch per foot slope. Minimum thickness for tapered perlite shall be ½ inch, based on "Standard Tapered Design."
- 1.1.27 Contractor option to install new tapered polyisocyanurate insulation with ½ inch wood fiberboard or perlite roof overlay to receive BUR membrane installation.
- 1.1.28 With fiberboard option, Contractor shall install tapered wood fiberboard roof drain sump ± 4 FT x 4 FT x ½ inch.
- 1.1.29 Install tapered perlite insulation crickets at all curbs to provide positive slope for roof drainage. Slope shall be ½ inch/ foot or one (1) inch/ foot as indicated on roof plan sheets.
- 1.1.30 Install new three (3) ply asphalt BUR over tapered perlite insulation in hot 'no smell' Type III asphalt.
- 1.1.31 Install glaze coat of hot Type III asphalt over three ply membrane with mop or

notched squeegee to ensure uniform converge.

- 1.1.32 Install wood fiberboard cant strips at all vertical projections.
- 1.1.33 Install new two ply felt membrane and granular surface modified bitumen membrane flashing for all base, curb and parapet. Terminate flashings six (6) inches o.c.
- 1.1.34 Install three ply membrane flashing on vertical surface of parapets.
- 1.1.35 Fabricate and install new sheet metal trim at exposed corners, terminations of membrane base flashing.
- 1.1.36 Clean exposed stucco at high / low construction. Prime masonry to receive new membrane flashing.
- 1.1.37 Fabricate and install new stainless steel splash pans to receive discharge from scupper drain onto low roof surfaces.
- 1.1.38 Fabricate and install new stainless steel sheet metal parapet scupper drains
- 1.1.39 Install new four (4) lb lead plumbing vent pipe flashing.
- 1.1.40 Install SBC Industries stainless steel conduit and hot stack flashing units.
- 1.1.41 Install Weather-Tite Lockin' Pockets Interlocking Pitch Pocket System for electric penetration flashing.
- 1.1.42 Install granular surface fire-rated modified bitumen cap sheet over BUR membrane in solid application of Cold Application Adhesive.
- 1.1.43 All seams in cap sheet shall be heat welded. Seam depth shall be two (2) inches minimum.
- 1.1.44 Install walkway protection pads at door opening onto Roof Area A, Roof Hatch as indicated on plan sheets.
- 1.1.45 Install walkway protection pads at HVAC unit, HVAC equipment platform or rails and at top and bottom of exterior roof access ladder.
- 1.1.46 Place new splash pans on roof walkway protection pad.
- 1.1.47 All roof drains, scuppers and associated drain pipe shall be inspected to ensure free flowing condition.
- 1.1.48 Fabricate and install new sheet metal cap for former out of service masonry chimney.
- 1.1.49 Remove asphalt, primer, membrane flashing from existing coping.

- 1.1.50 Fabricate and install new sheet metal conductor heads and downspouts.
- 1.1.51 Fabricate and install two downspouts on northwest portion of roof areas E to combine into one downspout to discharge into existing storm drain pipe.
- 1.1.52 Install new retrofit roof drains into existing roof drains.
- 1.1.53 Modify existing HVAC equipment rails to provide minimum eight (8) inches flashing height.
- 1.1.54 Grind loose or deteriorated mortar joints in existing ceramic coping. Tuck point joints with cement mortar/grout to match existing.
- 1.1.55 Modify roof access door/opening on West side of Roof Area A. Install new concrete curb for reinstallation of existing threshold.
- 1.1.56 Fabricate and install new metal exterior door for roof access to Area A. New door shall include new hardware, door lock conforming to Owner's specification, weather stripping, and exterior paint finish (color to be selected).

1.2 CONTRACT METHOD

- 1.2.1 Construct the work as a single lump sum contract except for the items, which are bid on a unit price basis as indicated on the Bid Form.

1.3 REFERENCE STANDARDS

- 1.3.1 For products specified by the association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

1.4 SITE CONDITIONS

- 1.4.1 Information in this section is provided only to establish a general description. The Contractor is responsible for visiting the site and satisfying themselves as to the existing conditions, size of roof areas, etc. before submitting their bid.
- 1.4.2 Existing construction for roof areas included in the Base Bid is a gravel surface coal tar BUR installed over concrete roof deck. (Roof Areas A, B, C, D) Roof area E has a modified bitumen cap sheet over coal tar BUR and concrete deck. Roof membrane and flashing specimens tested positive for Chrysotile, an asbestos containing material. (Roof Area's A, B, C, D, & E.) Roof Area F has an existing ballasted EPDM single ply roof over a metal deck.
- 1.4.3 New roof assembly construction requires tapered insulation to provide positive slope to parapet scupper drains, internal roof drains and gutter. A two ply temporary roof shall be installed over prepared concrete roof deck. New tapered perlite insulation and polyisocyanurate fill insulation shall be mopped to temporary

roof. The new roof assembly includes a three ply asphalt BUR with granular surface FR modified bitumen cap sheet. New membrane flashing and sheet metal flashing shall be installed. New sheet metal counterflashing and perimeter flashing shall be installed.

New retrofit aluminum roof drains shall be installed in existing cast iron roof drains. New stainless steel parapet scupper drains shall provide roof drainage. New sheet metal conductor heads and downspouts shall discharge rain water to existing storm drainage or on asphalt paving.

New roof assembly for completed roof will provide a twenty (20) year full cost (NDL) labor and material warranty. Contractor shall also provide Owner a Two Year Contractors Warranty.

1.5 WORK SEQUENCE

- 1.5.1 Work shall proceed in an orderly operation. Phased construction is unacceptable.
- 1.5.2 The Contractor shall strive to cause a minimum of disruption to the building operations and occupancy during roofing activities.

1.6 CONTRACTOR USE OF PREMISES

- 1.6.1 Limit use of premises for construction operations to allow for Owner occupancy.
- 1.6.2 Coordinate use of premises under direction of Owner.
- 1.6.3 The Contractor shall be held liable for any damages to the building, building contents, or occupants resulting from work under this contract. All necessary precautions shall be taken to protect the occupants and the building during the construction period.
- 1.6.4 The Contractor is to maintain the existing building in a safe and weather tight condition throughout the construction period. The Contractor is to repair any damage caused by him or any of his subcontractors.
- 1.6.5 The Contractor is to confine his operations at the site of the building. The site beyond this building is not to be disturbed. Parking for the Contractor and his employees will be identified by the Owner.
- 1.6.6 The Contractor is to keep existing driveways and entrances serving the premises clear and available at all times. Do not use for parking or storage of materials or equipment. The stockpiling of materials must be confined to the area identified by the Owner.
- 1.6.7 The Contractor and his personnel are to lock their vehicles and other mechanical or motorized construction equipment when parked and unattended. Do not leave

vehicles or equipment unattended with motor running or ignition key in place.

- 1.6.8 Open fires will not be permitted on the premises.
- 1.6.9 Utilities and Services: The Contractor will be provided water to the extent of the existing sources. The Contractor shall be responsible for any taps or connections that may be needed or desired by him. He is also responsible for getting the service to any location where needed or desired. The Contractor will be provided without charge reasonable quantities of available utilities, however, if the services are abused, they will be withdrawn. The Contractor shall provide temporary portable electric generators for electricity required during construction.
- 1.6.10 Contractor's Conduct: The following concerns are expressed to the Contractor and he is asked to ensure that all employees, subcontractors, and suppliers are aware of these warnings.
 - 1.6.10.1 No drugs, alcohol, or firearms will be permitted on the grounds of the facility.
 - 1.6.10.2 There will be no favors or fraternizing with occupants or employees of the facility.
 - 1.6.10.3 Contractor and sub-contractors are to take necessary precautions to protect all occupants and employees of the facility, Contractor personnel, and personal property from any damage from his operations.
 - 1.6.10.4 The Contractor, subcontractors, and material suppliers are to be careful during placement of materials and equipment. The Owner will in no way be responsible for equipment and materials lost as the result of being left unattended or misplaced.
 - 1.6.10.5 The use of foul, obscene, or abusive language by the Contractor's or subcontractor's employees is prohibited on the grounds of the facility. Violations of this policy may result in the dismissal of the Contractor.
 - 1.6.10.6 Smoking or use of tobacco products by the Contractor or subcontractor's employees is prohibited on the grounds of this facility. Violations of this policy may result in the dismissal of the Contractor.
- 1.6.11 All removal of debris and lifting of new roofing materials, roof accessories, etc, shall incorporate the use of a crane. Disposal chutes are not allowed.
- 1.6.12 Owner shall designate ground space for Contractor storage trailers, laydown and equipment and contractor vehicle parking.

1.7 OWNER OCCUPANCY REQUIREMENTS

- 1.7.1 Owner will occupy premises during entire period of construction for the conduct of his normal operations. Cooperate with the Owner's operations.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01021

CASH ALLOWANCES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

1.1.1 Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

1.2.1 This Section specifies administrative and procedural requirements for allowances and unit prices.

1.2.2 An Allowance is an amount determined by the Owner for work of indeterminate scope and cost. Each Bidder shall include the allowance amount in the Bid price.

1.2.3 The cost for work performed by Allowance covers items not anticipated or specifically delineated in documents and shall be determined in accordance with the Change Order procedures of the Contract Documents.

1.2.4 Contingency Allowance for the scope of Work, as specified in these Contract Documents, is Four Thousand Dollars (\$4,000.00).

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SUMMARY

- 1.1.1 A payment or payments made to Contractor for work performed shall not constitute acceptance or approval of the work and shall in no way relieve Contractor from the requirements of the Contract.
- 1.1.2 All sums received by the Contractor for any part or parts of the work furnished or performed by a Subcontractor shall be paid promptly to the latter by Contractor and while in the hands of the Contractor shall constitute trust funds held for the use and benefit of Owner.
- 1.1.3 Contractor shall submit with payment requests lien releases from material suppliers which state that suppliers have been paid for materials supplied to the project. Payment requests may be delayed if not received in a timely manner.
- 1.1.4 If payments are to be made on account of materials or equipment not incorporated in the work, but delivered and suitably stored at the Site, or at such other location agreed upon in writing, such payments shall be conditioned upon submission by Contractor of bills of sale or other documents satisfactory to the Owner establishing Owner's title to such materials or equipment or otherwise protecting Owner's interest therein including the prepayment of applicable insurance and transportation charges to the Site.

1.2 APPLICATION FOR PAYMENT

- 1.2.1 Monthly Application for Payment shall be submitted to Consultant for review and forwarding to Owner in quadruplicate on AIA Documents G702 and G703. Provided an Application for Payment is received by the Consultant not later than the last day of a month, the Owner shall make payment to the Contractor not later than the last day of the following month. If an Application for Payment is received by the Consultant after the application date fixed above, payment shall be made by the Owner not later than 30 days after receiving approved Application for Payment from Consultant.
- 1.2.2 96.5% of the value of materials stored at the site and 96.5% of work accomplished, less previous payments, shall be paid by Owner to Contractor in monthly installments upon Consultant's certification.
- 1.2.3 Final payment shall be made 30 days after Consultant has certified completion to the Owner, and specified warranties are provided in accordance with Section 01700, Paragraph 1.4.2.

1.3 UNIT PRICES

- 1.3.1 A Unit Price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.
- 1.3.2 Before proceeding with work, Contractor shall survey the work to be covered under Unit Prices in the presence of the Consultant for verification of quantities for the Project.
- 1.3.3 Unit Price Schedule: Unit Prices shall include costs of materials, delivery, labor (to remove and replace), insurance, rental of tools and equipment, overhead and margin of profit.
1. Remove and dispose of damaged or deteriorated concrete roof deck and replace with new Portland Cement concrete deck and metal lath/felt form to match existing.
 - a. Unit of Measure: Square Feet Installed.
 2. Remove and dispose of damaged or ponding areas of concrete roof deck and replace with ± NVS Premix or Zono Patch Premix to match existing.
 - a. Unit of Measure: Square Feet Installed
 3. Remove and dispose of damaged or deteriorated steel roof deck and replace with new 1 ½ inches, 22 gage galvanized steel roof deck to match existing.
 - a. Unit of Measure: Square Feet Installed
 4. Remove and dispose of damaged or deteriorated wood blocking, nailers and replace with new treated wood blocking, nailers to match existing.
 - a. Unit of Measure: Board Feet Installed

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 PROCEDURES

- 1.1.1 Each transmitted document shall identify the project name and Contractor. Material submittals shall also identify the type and trade name of materials, material manufacturer, intended use and specification number. Deviations from Contract Documents shall be identified.
- 1.1.2 Submittals shall bear the Contractor's stamp and indicate approval and date.
- 1.1.3 After Architect's review of materials, revise and resubmit, as required, identifying changes made since previous submittal.

1.2 BID SUBMITTALS

- 1.2.1 Certification from the manufacturer of materials bid that the contractor is approved by the manufacturer for application of the roofing system being installed on this Project. The letter shall certify that the contractor has satisfactorily applied the type of roof specified on projects which have been completed for at least 5 years under warranty.
- 1.2.2 Letter of intent from the manufacturer that he will furnish warranty as specified.
- 1.2.3 Submit special documents with Bid.

1.3 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- 1.3.1 Refer to Section 01340.
- 1.3.2 Contractor submittals shall be forwarded to Architect within 7 calendar days after receipt of signed Contract. The successful Contractor shall submit 6 copies of the required information to the Architect.

1.4 CONTRACTOR INFORMATION

- 1.4.1 Submit to Architect on or before Pre-Construction Conference the following documents:
 - 1.4.1.1 Emergency contact information including phone numbers of principals, superintendent, foreman, and project manager.
 - 1.4.1.2 Foreman's Statement (copy attached).
 - 1.4.1.3 Contractor's Schedule of Values, AIA Document G703.
 - 1.4.1.4 Contractor's Construction Schedule indicating weekly goals and Substantial Completion dates for each roof area.
 - 1.4.1.5 Four copies of Material Safety Data Sheets for all materials to be incorporated in roof assembly.
 - 1.4.1.6 W-9, Request for Taxpayer Identification and Certification.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- 2.1.1 Membrane and associated membrane flashing are to be manufactured and labeled by the membrane materials manufacturer or, if supplied by a different manufacturer, approved for use by membrane manufacturer in compliance with warranty requirements.

PART 3 EXECUTION

3.1 TIMING

- 3.1.1 Make all submittals in accordance with schedules specified herein.
- 3.1.2 A minimum of 10 days shall be allowed for review by the Architect following his receipt of the submittal.
- 3.1.3 If a submittal contains more than 10 shop drawings, Contractor shall indicate which drawings must be returned within 10 days. Architect shall have an additional 10 days to return the balance of submittals.
- 3.1.4 Delays caused by tardiness in receipt of submittals shall not be an acceptable basis for extension of the Contract completion date.

3.2 REVIEW

- 3.2.1 Review by the Architect shall be directed to the general method of construction and shall not be construed as a complete check nor shall the review relieve the contractor from responsibility for errors and/or omissions that may exist.
- 3.2.2 The notations "Reviewed" or "Make Corrections as Noted" shall authorize the Contractor to proceed with fabrication, purchase, or both subject to the revisions, if any, required by the Architects review comments.
- 3.2.3 The Contractor shall make all revisions as required. If the Contractor considers any required revisions to constitute a change, he shall notify the Architect under the provisions of the General Conditions.
- 3.2.4 Only those revisions directed or approved by the Architect shall be shown on the re-submittal.
- 3.2.5 After a submittal has been approved by the Architect, substitution of materials, equipment and/or procedures shall not be considered unless accompanied by an acceptable explanation for the substitution.

**FOREMAN'S STATEMENT
PARTIAL ROOF REPLACEMENT
HAMPTON ST. ANNEX
1600 HAMPTON STREET
COLUMBIA, SOUTH CAROLINA 29201**

I, _____ (Name), an employee of _____ (Contractor) hereby state that I have my own personal copy of the project specifications and drawings, have thoroughly read them and have visited the work site.

By _____

Date _____

END OF SECTION

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.1 SHOP DRAWINGS

- 1.1.1 Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by the Contractor, Subcontractor, manufacturer, supplier or distributor which illustrate some portion of the Work.
- 1.1.2 Shop drawings are to be submitted by transmittal letter with the following information:
 - A. Consultant's Project Number
 - B. Submittal Data
 - C. Submittal Number
 - D. Project Title
 - E. Name of Contractor and Approval Date
 - F. Reference to Specification Section, Paragraph and/or Drawing.
 - G. The location of the work covered by the shop drawing.
 - H. Any qualification, deviation or departure from Contract.
 - I. Any additional information required by the Specifications for the particular material being furnished.
- 1.1.3 Each shop drawing shall be numbered. The same numbering system shall be retained through all revisions. Each drawing shall have a clear space for the approval stamps of Contractor and Consultant.
- 1.1.4 In submitting shop drawings for approval, all associated shop drawings related to a complete assembly shall, be submitted at the same time so that each may be checked in relation to the entire assembly.
- 1.1.5 Contractor shall prepare composite shop drawings and installation layouts, when required, to depict proposed solutions for tight field conditions.
- 1.1.6 With respect to standard manufactured items, Contractor shall submit to Consultant manufacturer's illustrated cuts of the items to be furnished showing details, sizes and dimensions and all other pertinent information. Sufficient copies of cuts shall be furnished so that Consultant may maintain a minimum of 4 copies and return to Contractor the number required for Contractor's use.
- 1.1.7 Contractor shall submit a minimum of 4 copies of each drawing. Sufficient copies of shop drawings shall be furnished so that Consultant may maintain a minimum of 4 copies and return to contractor the number required for Contractor 's use.

- 1.1.8 Submit shop drawings for the following details:
- A. Retrofit Roof Drains
 - B. Equipment Curb Counterflashing
 - C. Parapet Scupper Drain
 - D. Sheet Metal Counterflashing
 - E. Plumbing Vent Flashing
 - F. Out-of-Service Roof Curb Deck Closure
 - G. Sheet Metal Coping Cap and Locking Cleat
 - H. Stainless Steel Scupper Drain
 - I. Stainless Steel Splash Pan
 - J. Sheet Metal Conductor Head
 - K. Tapered Insulation Roof
 - L. Roof Drain Sump
 - M. Weather-Tite Lockin' Interlocking Pitch Pocket System, Electrical Conduit Flashing
 - N. Sheet Metal Downspout and Hanger Bracket
 - O. SBC Industries Hot Stack Flashing
 - P. Sheet Metal Gravel Step Locking Cleat
 - Q. Steel Roof Access Door, Hardware, Etc.
 - R. Sheet Metal Gutter, Gutter Bracket

1.2 PRODUCT DATA

- 1.2.1 Submit a complete description of the roofing system listing all components and their respective manufacturer.
- 1.2.2 Submit each manufacturer's technical specifications and installation procedures for each major roofing component required.
- 1.2.3 Minimum required components include fasteners, insulation, roof membrane, flashing material, edge metal, caulking.
- 1.2.4 Submit four (4) copies of manufacturer's safety data sheets (MSDS). Contractor's Superintendent or Foreman shall maintain copy of MSDS at job at all times. Copies shall be provided Owner's representative.

1.3 MANUFACTURER'S CERTIFICATES

- 1.3.1 Submit a letter from the membrane manufacturer acknowledging the brand name and type of insulation proposed for use and his approval of the use of this insulation with his product.
- 1.3.2 Submit a copy of the licensed membrane applicator agreement.
- 1.3.3 If any membrane components are not packaged by the membrane manufacturer, submit a letter from the membrane manufacturer clearly identifying the component and acknowledging approval to use this component on this Project.
- 1.3.4 Furnish Manufacturer's Certificates of Compliance with materials specifications, for materials incorporated into the work, signed by a responsible officer of the

manufacturing firm and notarized.

1.4 SAMPLES

- 1.4.1 Submit two 6-inch long samples of each metal shape to be used on this Project to Consultant for approval. Metal shapes are to be constructed in accordance with approved shop drawings and will be used for establishment of quality standards during installation.

1.5 RELATED SECTIONS

- 1.5.1 Section 01300, Submittals.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 QUALITY CONTROL - CONTRACTOR

- 1.1.1 Maintain quality control over products, services, site conditions, and workmanship, to produce work of specified quality.

1.2 QUALITY CONTROL - OWNER

- 1.2.1 The Owner reserves the right, at his discretion, to retain the services of an independent construction monitoring representative to provide full or periodic inspection of the roofing application. If Owner engages this service, the Contractor will be informed. Testing may be performed to determine any deficiencies in the roofing assembly.
- 1.2.2 Cuts may be made to determine the quantity and quality of material and workmanship using the following procedures:
 - 1.2.2.1 Cuts will be made after all roofing felts are in place, but will be done before final surfacing is accomplished.
 - 1.2.2.2 Cuts will be made across felts 4" x 40", at locations selected by Consultant.
 - 1.2.2.3 Not over one cut for each 20 squares will be made, except that a cut may be made in any separate, well defined area, regardless of size.
 - 1.2.2.4 Where possible, samples will be weighed and inspected at the site and replaced in openings.
 - 1.2.2.5 Felt weights will be assumed to be the minimum allowable by appropriate ASTM standard.
 - 1.2.2.6 Felt weights will be that provided by the manufacturer.
- 1.2.3 Perform all patching and repairing of lightweight gypsum concrete using Zono Patch, NVS Premix or Pyrofil.
- 1.2.4 Work found in violation of the Specifications, or not in conformance with acceptable roofing practices/standards, shall be subject to rejection including complete removal and replacement with new materials at Contractor's expense.
- 1.2.5 Failure of Owner or Consultant to discover or reject defective work, or work not in accordance with the Contract, shall not be deemed an acceptance thereof, nor a waiver of Owner's rights to Contractor's compliance with the Contract or performance of the work, or any part thereof. No partial or final payment, or partial or entire occupancy, by Owner shall be deemed to be an acceptance of

work or of material which is not strictly in accordance with the Contract, nor shall it be deemed a waiver by Owner or any of Owner's rights pursuant to this Contract or otherwise.

1.3 QUALITY CONTROL - MANUFACTURER

- 1.3.1 Selected membrane manufacturer shall be required to provide qualified personnel to observe field conditions, including suitability of surfaces at material installation at start and completion of field work. Manufacturer's representative shall submit written reports to the Consultant listing observations and recommendations. Roofing contractor shall be responsible for insuring site visits by membrane manufacturer's representative.
- 1.3.2 Copy of manufacturer's technical inspection reports shall be forwarded to Consultant within seven (7) days of inspection.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION

- 1.1.1 Contractor shall provide for temporary facilities and controls required for the performance of the project except as otherwise noted. Such items include, but are not necessarily limited to, utilities such as heat, water, electricity and telephone; sanitary facilities; contractor's facilities; and enclosures such as tarpaulins, barricades, and canopies.
- 1.1.2 All equipment furnished by Contractor shall comply with all pertinent safety requirements.
- 1.1.3 Ladders, planks, hoists, and all similar items furnished by individual trades in the execution of their own portions of the work are not part of this section.
- 1.1.4 All temporary facilities will be subject to the Owner's approval.

1.2 PRODUCT HANDLING

- 1.2.1 Contractor shall exercise all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the project.
- 1.2.2 All required connections to existing utility systems shall be made with minimum disruption. If disruption of existing service is required, notice shall be given to the Owner and connections shall not be made without Owner's approval. If necessary, Contractor shall provide for alternate temporary service.

PART 2 PRODUCTS

2.1 TEMPORARY UTILITIES

- 2.1.1 Electricity: Owner will not furnish electricity to the Contractor during this project.
- 2.1.2 Heating: The Contractor shall provide and maintain all heat needed for proper conduct of all operations included in the work.
- 2.1.3 Water: The Contractor will be provided water to the extent of the existing sources. The Contractor shall be responsible for any taps or connections that may be needed or desired by him. He is also responsible for getting the service to any location where needed or desired.
- 2.1.4 Connects and Disconnects: In the event it is necessary to disconnect any electrical wiring or connections, plumbing lines or other building services, notify the Owner to provide sufficient advance time to minimize disruption of service.

Contractor shall not disconnect or connect services unless authorized in writing by Owner. Contractor is responsible for all disconnects and connections.

2.2 TEMPORARY FACILITIES

- 2.2.1 Sanitary Facilities: The Contractor shall provide and maintain proper temporary sanitary facilities, including but not limited to portable toilets, in the quantity required for use of all personnel. All facilities shall be maintained in a sanitary condition at all times. Location shall be approved by Owner.
- 2.2.2 Ventilated Storage Facilities: Provide, as required, facilities to maintain specific storage conditions as described within this Specification and as recommended by the materials' manufacturers for use in construction.
- 2.2.3 Contractor shall provide temporary chain link fence to enclose asphalt kettle, LP storage tank. Height of enclosure shall be 5 feet minimum. After daily operation, all ports and openings in the kettle shall be locked. LP gas storage tank valves shall be locked after daily operation. Kettle shall be equipped with the safety loading feature and after burner to reduce the odor of asphalt on the grounds of the school.

2.3 CONSTRUCTION AIDS

- 2.3.1 Enclosures: The Contractor shall furnish, install and maintain for the duration of the project, all scaffolds, ladders, tarpaulins, fencing, barricades, warning signs, platforms, bridges, canopies, steps, and other temporary construction required to properly facilitate completion of the project in compliance with all safety and other regulations. The Contractor shall provide all necessary safeguards to warn and prevent pedestrians and Owner's personnel from being exposed to dangers or hazards created by this project.

The kettle area will be enclosed in a fence at all times. After daily operation, all ports and openings in the kettle will be locked. The LP gas tank valve shall be locked.

- 2.3.2 Disposal Chute: Shall not be accepted.
- 2.3.3 All roofing materials shall be lifted with boom truck, mechanical lift or crane.
- 2.3.4 Signs: No signs or advertising of any kind shall be allowed on the project site unless approved in advance by Owner.
- 2.3.5 Roof Access: The Contractor shall provide equipment for access to the roof.
- 2.3.6 Parking: Contractor's construction vehicles shall enter the project site and park in areas as directed by the Owner. The Contractor shall be responsible for coordination of traffic by his subcontractors, suppliers, etc., so as not to disrupt ongoing operations of the Owner.

2.3.7 Contractor shall provide suitable storage facilities, trailers which shall have temporary heat to protect roofing materials.

2.3.8 Fire Extinguishers: Contractor shall provide adequate sized fire extinguisher for asphalt kettle area. A minimum of one additional fire extinguisher shall be located on roof adjacent to work area.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01560

CONSTRUCTION CLEANING

PART 1 GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Scrap, debris, waste material, and other items from all operations shall not be allowed to accumulate on the Project site. Debris shall be removed and properly disposed of daily in accordance with all Federal, State and Local regulations.
- 1.1.2 The buildings and site shall be maintained in a clean condition throughout the duration of the Project. Contractor shall comply with all requirements for cleanliness described in other sections of these Specifications.
- 1.1.3 All traces of concrete shall be removed from adjacent surfaces and on asphalt paving.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- 2.1.1 Contractor shall provide all required manpower, material and equipment to maintain the specified standard of cleanliness.
- 2.1.2 Contractor shall use only those materials and equipment which are compatible with the surface being cleaned as recommended by the manufacturer or approved by the Architect.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

- 3.1.1 Contractor shall inspect roof drainage system and ensure all drains are open and free flowing at all times.
- 3.1.2 Contractor shall conduct daily inspections to ensure that the requirements for cleanliness are being met. Roof surface and grounds in work area shall be cleaned before **close of work each day**.
- 3.1.3 Contractor shall provide storage containers for all items awaiting removal from the site. Storage containers shall be approved by the Architect.
- 3.1.4 Construction debris receptors shall be covered to prevent wind blown articles on site.

3.2 STORED MATERIALS

- 3.2.1 Stored items shall be kept in an orderly arrangement allowing maximum access and shall not impede drainage or traffic.
- 3.2.2 Contractor shall inspect all arrangements of materials stored on the Project site on a minimum weekly basis and shall service all arrangements in accordance with the requirements of this Section.
- 3.2.3 Contractor is responsible to return grounds to pre-roof construction condition.
- 3.2.4 All grassed areas, planted shrubbery, trees, ground ornaments, statuary shall be protected.

END OF SECTION

SECTION 01610

STORAGE AND PROTECTION

PART 1 GENERAL

1.1 FACILITY PROTECTION

- 1.1.1 Limit size of work sections to safeguard adjacent materials, structures, etc., and to minimize dust and noise.
- 1.1.2 Protect existing facilities from damage during work. Do not overload existing paving, curbs, sidewalks, etc. with vehicle traffic. Do not overload new or existing construction with demolition debris, equipment, etc.
- 1.1.3 Protect existing facilities from fire as a result of re-roofing operations. Contractor shall provide suitable and adequate fire extinguishers conveniently located on the roof at staging areas, storage areas and at areas or equipment where an open flame is being used. Competent operators shall be in attendance at all times and shall be properly trained or instructed in fire protection.
- 1.1.4 Plywood, minimum 3/4 inch thick, or other suitable materials shall be used to protect roof areas from damage that may be caused by concentrated equipment loads and foot traffic.
- 1.1.5 Roof traffic shall be confined to work areas. Contractor shall be responsible for leaks that develop in traffic areas during and after Project completion.
- 1.1.6 Contractor shall protect interior operations from adverse weather during roofing operations.
- 1.1.7 The Contractor is responsible and shall be held liable for any damages to the building, building contents, its occupancy, grounds or landscaping resulting from work under the Contract. In the event of damage, Contractor will restore property to a condition equivalent to that at the time the Project started.
- 1.1.8 The Contractor shall keep existing drainage facilities clear of debris during construction.

1.2 MATERIAL PROTECTION

- 1.2.1 Products shall be transported by methods which avoid damage. Damaged material shall be subject to rejection by the Consultant.
- 1.2.2 Store materials on trailers, covered trailers or trailers with materials covered tarps. Factory applied wrappings or polyethylene covers **are not acceptable**.
- 1.2.3 Wet materials shall be removed from the Project site.

- 1.2.4 All roofing felts, membranes, flashing materials shall be stored in a closed storage trailer.

1.3 STORAGE

- 1.3.1 Contractor shall be responsible for proper storage of equipment, materials and devices furnished by himself and/or his subcontractors and suppliers. Heated storage facilities shall be provided for critical temperature roofing materials.
- 1.3.2 All storage areas are subject to approval by the Owner or his authorized representative.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

- 3.1 Plywood walkway shall be placed on surface of roof deck, roof membrane to protect gypsum concrete roof deck from damage. All wheeled traffic lanes for equipment shall travel over plywood surface **(NO EXCEPTIONS)**.
- 3.2 Plywood shall be utilized for wheeled buggies during removal of roof debris to protect completed roof membrane and insulation.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 FINAL CLEANING

- 1.1.1 Except as specifically provided otherwise, "clean" shall be interpreted as meaning the level of cleanliness generally attainable by skilled cleaners using commercially available building maintenance equipment and materials.
- 1.1.2 Execute cleaning prior to final inspection.
- 1.1.3 Unless otherwise directed by the Consultant, the Contractor shall clean all adjacent areas on the site and completely remove all resultant debris.
- 1.1.4 Clean all roof areas and drainage systems. Clean interior and exterior surfaces exposed to view; remove stains and foreign substances. Such work shall be accomplished at no additional cost to the Owner.
- 1.1.5 All traces of asphalt and concrete shall be removed from adjacent surfaces on which it was not scheduled to be placed.
- 1.1.6 Clean equipment as required.
- 1.1.7 Clean site; sweep paved areas, rake clean other areas.
- 1.1.8 All tools, equipment, construction materials, scrap, debris, and waste shall be removed from the project site.
- 1.1.9 Restore grass areas by filling ruts, compacting soil, raking, seeding, and fertilizing. Heavily damaged areas shall be leveled, compacted and covered with matching sod. Replace any damaged sidewalks or pavement.
- 1.1.10 Remove portable sanitary facilities from site. Clean and disinfect area as necessary to ensure sanitary health conditions.
- 1.1.11 Owner's decision shall be final for any questionable repairs.

1.2 FINAL INSPECTION

- 1.2.1 Consultant's representative will conduct a final inspection with Owner's representative, the Contractor's representative, and the membrane manufacturer's representative.
- 1.2.2 Consultant will issue a final acceptance certificate.
- 1.2.3 The results of inspections conducted by these parties, including materials manufacturer, shall be submitted by Consultant to Owner in writing.

1.3 PROJECT RECORD DOCUMENTS

- 1.3.1 Contractor shall submit 4 copies of "as-built" documents to Consultant with letter of transmittal indicating date, project title, Contractor's name and address, list of documents, and signature of Contractor.

1.4 WARRANTIES AND BONDS

- 1.4.1 Refer to Section 1740, Warranties and Bonds, for requirements.
- 1.4.2 Final payment will be made to the Contractor only after 2 copies of the warranties and guarantees have been submitted and the roofing system manufacturer acknowledges that all bills are paid. All such documents shall show the project name and location and Owner's name.

1.5 CLOSE-OUT FORMS

- 1.5.1 Final payment will be made to the Contractor only after the following forms have been submitted.
 - 1.5.1.1 Certificate of Substantial Completion, AIA G704.
 - 1.5.1.2 Release or Waivers of Liens from subcontractors and suppliers.
 - 1.5.1.3 Consent of Surety to Final Payment, AIA G707.
 - 1.5.1.4 Contractor's Affidavit of Payment of Debts and Claims, AIA G706.
 - 1.5.1.6 Contractor's Affidavit of Release of Liens, AIA G706A.
 - 1.5.1.7 Contractor's Release or Waiver of Liens Conditional Upon Receipt of Final Payment on Contractor's letterhead (Form attached).
 - 1.5.1.8 "No Asbestos" Certification (Statement on Contractor's letterhead that no asbestos containing materials were used in the completion of the Work.)
 - 1.5.1.9 Two (2) copies of "As Built" roof plans

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

PARTIAL WAIVER AND RELEASE OF LIEN

(ON CONTRACTOR'S LETTERHEAD)

The undersigned hereby acknowledges receipt of \$ _____ paid by _____ on account of labor performance and materials furnished for the improvement of the following premises: 1600 Hampton Street Annex, Columbia, SC 29201.

In consideration of that payment the undersigned hereby releases, waives and relinquishes his/its lien rights, claims or rights of lien against those premises and any surety bonds in favor of the Owner and all other persons, firms, partnerships or corporations.

The undersigned warrants that it/he has the right to execute this partial waiver and release. It/He warrants further that all laborers employed by the undersigned and all materials and supplies furnished by others to him/it in connection with construction of the improvements on the above described premises have been fully paid and that no security agreement has been executed by him/it covering any part of the improvements of the premises.

The undersigned does not hereby release or waive any lien, rights or claims which he/it may acquire for labor performed or materials furnished after the date of this instrument.

Signed and sealed this _____ day of _____, 20 _____.

WITNESS:

Company/Corporation

BY: _____

TITLE: _____

Sworn to and subscribed before me this _____ day of _____, 20 _____.

Notary Public

My Commission Expires: _____

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Upon completion of the work and prior to the final payment, the Contractor shall submit the following items to the Consultant.
- A. Copies of all manufacturers' punch lists and documentation of completion.
 - B. Copies of all punch lists prepared by the Consultant and documentation of completion.
 - C. Manufacturer's statement that the project has been inspected by the manufacturer's authorized representative and is suitable for warranty.
 - D. Manufacturer's special labor and material warranty to Owner.
 - E. Contractor's warranty to Owner.

1.2 RELATED SECTION

- 1.2.1 Submit all items required by this Section as part of Contract Closeout, Section 01700.

1.3 WARRANTIES AND BONDS

- 1.3.1 Comply with the General Conditions of the Contract concerning warranties and bonds. The Contractor shall agree that the work covered under this Contract shall remain free from any water penetration and physical defects caused by defective workmanship or materials for a period of 2 years from the date of final acceptance by Owner.
- 1.3.2 Emergency repairs to defects and leaks shall be performed within two working days of receiving notice from Owner. As soon as weather permits, permanent repairs and restoration of affected areas shall be accomplished in a manner in conformance with the original Contract requirements. This work shall be done without additional cost to the Owner, except if it is determined that such leaks and defects were caused by abuse, lightning, hurricane, tornado, hail storm, or other unusual phenomena.
- 1.3.3 In addition, the Contractor and Owner's representative shall conduct an inspection approximately 30 days prior to the end of the Contractor's warranty to determine the present physical condition of the roofing system. The Owner's representative shall then submit a written report as to the findings of this inspection. The Roofing Contractor, at his own expense, shall repair any defects covered under the scope of this contract.
- 1.3.4 The warranties shall also state that the Owner has the right, at any time during the 2 year Contractor's warranty period and the Manufacturer's warranty period, to make emergency repairs to protect the contents of the building or the building itself

from damage due to leaking. The cost of emergency repairs made during the first two years of the warranty period shall be borne by the Contractor and action by the Owner shall not invalidate the warranty.

1.3.5 Upon completion of the work, and before final payment, Contractor shall furnish Owner a ROOFING SYSTEM GUARANTEE with flashing and insulation endorsement covering all workmanship and materials issued by the roofing materials manufacturer for a period of 20 years from date of acceptance by Owner. Warranty shall include No Dollar Limit (NDL) or No Penal Sum language to describe coverage. The Contractor's warranty shall neither replace or negate any agreement furnished by the manufacturer.

1.3.6 Starting dates of all warranties shall be the date of the final inspection and Owner acceptance.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

**(CONTRACTOR'S LETTERHEAD)
TWO YEAR WARRANTY**

Known all men by these presents, that we, (Contractor), having installed insulation, roofing, flashing, and sheet metal work, and having accomplished certain other work on the **Partial Roof Replacement, 1600 Hampton Street Annex** under contract between the **University of South Carolina** and (Contractor), warrant to the **University of South Carolina** with respect to said work that for a period of two years from date of final acceptance of said work, the roofing system including three ply asphalt BUR with granular surface SBS modified bitumen cap sheet, membrane flashing, sheet metal flashing, retrofit roof drains, parapet scupper drains, sheet metal conductor heads and downspouts, gutter and new steel roof access door shall be absolutely watertight and free from all leaks, provided however that the following are excluded from this warranty:

- a. Defects or failures resulting from abuse by the Owner.
- b. Defects in design involving failure of (1) structural frame, (2) load-bearing walls, and (3) foundations.
- c. Damage caused by fire, tornado, hurricane, acts of God, wars, riots, or civil commotion.

We, (Contractor), agree that should any leaks occur in the roofing, we will promptly remedy said leaks in a manner to restore the roof to a watertight condition by methods compatible to the system and acceptable under industry standards and general practice. Owner or Owner's Agent shall notify Contractor of any defects, leaks within fifteen (15) days of disclosure. Notification shall be made in writing or facsimile to Contractor's office. Contractor shall then identify cause of defect or leak and repair or correct to provide a watertight surface within thirty (30) calendar days of notification.

We, (Contractor), further agree that for a period of two years from date of final acceptance referred to above, we will make repairs at no expense to the Owner, to any defects which may develop in the work including, but not limited to, blisters, wrinkles, ridges, splits, disbanded or loose insulation, and loose membrane flashing and/or metal flashings, in a manner compatible to the system and acceptable under industry standards and general practice.

We, (Contractor), also agree that the Owner has the right, at any time during the two-year warranty period, to make emergency repairs to protect the contents of the building or the building itself from damage due to leaking. The cost of emergency repairs made during the first two years of the warranty period shall be borne by the Contractor and action by the Owner shall not invalidate the warranty.

IN WITNESS WHEREOF, we have caused this instrument to be duly executed, this _____ day of _____, 20 _____.

CONTRACTOR:

WITNESS:

by _____
President (Owner)

Notary Public

END OF SECTION

DIVISION 2
SITWORK

SECTION 02070

SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Remove and dispose of existing gravel surface coal tar pitch BUR on Roof Areas A, B, C, D and G.
- 1.1.2 Remove and dispose of existing modified bitumen surface coal tar pitch BUR on Roof Area E.
- 1.1.3 Remove and dispose existing ballasted EPDM single ply assembly on Roof Area F.
- 1.1.4 Inspect concrete or metal roof deck to ensure structural integrity prior to installation of new roof assembly.
- 1.1.5 Remove and dispose of out of service roof penetrations.
- 1.1.6 Remove and dispose of existing membrane flashing containing asbestos.
- 1.1.7 Remove and dispose of existing curb flashing, membrane and sheet metal flashing.
- 1.1.8 Remove and dispose of existing sheet metal, counterflashing and out-of-service mechanical equipment and skylight roof curbs.
- 1.1.9 Remove and dispose of damaged or deteriorated concrete roof deck and replace with new Portland cement concrete deck and form board to match existing. (Unit Price)
- 1.1.10 Remove and dispose of damaged or deteriorated surface of concrete roof deck and replace with $\pm \frac{1}{4}$ inch to $\frac{3}{8}$ inch Zono Patch Premix or Pyrofil to match existing. (Unit Price)
- 1.1.11 Remove and dispose of damaged or deteriorated wood blocking, nailers and replace with new treated wood blocking, nailers to match existing. (Unit Price)
- 1.1.12 Remove and dispose of all out-of-service roof-top equipment and roof penetrations and close roof deck openings as specified and indicated on roof plan sheets.

1.2 RELATED WORK

- 1.2.1 Storage and Protection - Section 01620.
- 1.2.2 Rough Carpentry - Section 06100.

1.2.3 Sheet Metal Flashing and Trim – Section 07620

1.2.4 Roof Specialties and Accessories – Section 07700

1.3 PROTECTION

1.3.1 Limit size of work sections to safeguard adjacent materials, structures, etc. and to minimize dust, noise and water damage.

1.3.2 Protect existing facilities from damage during work. Do not overload existing paving, curbs, sidewalks, etc. with vehicle traffic. Do not overload existing construction with demolition debris, equipment, etc.

1.3.3 Coordinate all demolition with Owner.

1.3.4 Removal and disposal of construction debris shall be accomplished by crane, boom truck or other external lifting equipment. All debris shall be discharged into dump trucks or dumpsters and removed from site daily.

1.3.5 Damage shall be repaired at Contractor's expense in accordance with General Conditions.

1.3.6 Demolition shall be performed by personnel familiar with the replacement of materials being removed.

1.3.7 Contractor shall supervise closely demolition phase of BUR removal from gypsum concrete roof deck. Saw cuts into surface of deck with depth of 3/16 inch or more are not allowed.

1.3.8 **Excessive demolltion**, as determined by the Owner's representative, shall be replaced with similar and equal materials at Contractor's expense in accordance with General Conditions.

1.3.9 Contractor shall furnish necessary temporary protection from weather at all areas of demolltion to protect interior of building from elements of weather at all times. Install specified roof system prior to darkness and tie in existing roof system as needed to make roof water tight daily.

1.3.10 Contractor shall maintain safety precautions during performance of work in accordance with General Conditions.

- 1.3.11 No demolition shall be performed if the chance of precipitation is imminent, as reported by nearest office of the National Weather Service: daily weather log to be kept by Contractor.
- 1.3.12 Contractor shall inspect all roof drains and insure free-flowing condition at all times. Roof drainage system shall be inspected at close of work each day to ensure free-flowing condition.

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Except where noted otherwise, materials being demolished become the property of the Contractor. Remove debris in such a manner as to not accumulate on the roof. Demolition debris shall be legally disposed of by Contractor.

PART 3 EXECUTION

3.1 DEMOLITION

- 3.1.1 The Owner's representative and the Contractor shall document the actual quantities removed for materials bid on a unit price basis.
- 3.1.2 Remove only as much material as can be totally replaced in one day. Water cutoffs are to be installed daily where existing and new roof membranes abut to ensure watertight integrity of new system.
- 3.1.3 Construction demolition debris and waste materials shall be placed in storage container and covered with secured tarpaulin to prevent dispersal on site by wind. Storage container shall be replaced when full to minimize potential grounds contamination.
- 3.1.4 Verified quantities of all unit price items replaced shall be listed and submitted each month with Contractor's Periodic Application for Payment.

END OF SECTION

SECTION 02080
ASBESTOS REMOVAL

PART I GENERAL

1.0 SUMMARY

This Section requires removal and disposal, off site, of the following: asbestos-containing materials in the bituminous flashing membrane.

Roof membrane and flashing membrane specimens tested positive for asbestos-containing materials, requiring removal and disposal in hazardous waste disposal facility.

The asbestos containing materials (ACM) indicated above are non-friable. It is the intent of these specifications to identify the removal and disposal of ACM on this project as non-friable. The Contractor should exercise caution during the removal and disposal of ACM. The Contractor shall be responsible during the removal and disposal of ACM to insure compliance with State and Federal asbestos abatement regulations.

The Owner will not be conducting daily air monitoring.

APPLICABLE PUBLICATIONS:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

Code of Federal Regulations (CFR):

29 CFR 1910-134	Respiratory Protection
29 CFR 1910-145	Specifications for Accident Prevention Signs and Tags
29 CFR 1926.58	Asbestos, Tremolite, Anthophyllite, and Actinolite
40 CFR 61, Subpart A	General Provisions
40 CFR 61, Subpart M	National Emission Standard for Asbestos
40 CFR 763	Asbestos Containing Materials in Schools

American National Standards Institute (ANSI) Publications:

Z9.2-79	Fundamentals Governing the Design and Operation of Local Exhaust Systems
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Z88.2-80 Practice for Respiratory Protection

American Society for Testing and Materials (ASTM) Publications:

D 1331-56 Surface and Interfacial Tension of
(R80) Solutions of Surface-Active Agents

Underwriters Laboratories Inc. (UL) Publication:

586-85 High-Efficiency, Particulate, Air Filter Units

SUBMITTALS:

General: Submit the following in accordance with the conditions of Contract and Division I specification sections.

Prior to commencing work involving asbestos materials the following must be submitted by the contractor and approved by the Owner's representative.

ASBESTOS PLAN:

Submit a detailed job-specific plan of the work procedures to be used in the removal and demolition of materials containing asbestos. Such plan shall include a sketch showing the location, size, and details of asbestos control areas, regulated areas, and the location and details of the decontamination systems. The plan shall also include interface of trades involved in the construction, sequencing of asbestos-related work, disposal plan, type of wetting agent to be used, solvents, lockdown encapsulant, air sampling protocols, respirators, protective equipment, and a detailed description of the method to be employed in order to control pollution i.e. procedures, engineering controls, special equipment, etc. The plan shall be approved by the Owner's representative prior to the start of asbestos work. Prior to beginning work, the Contractor shall meet with the Owner's representative to discuss in detail the asbestos plan, including work procedures and safety precautions.

CERTIFICATES AND PERMITS:

- a. Required Notifications (DHEC)
- b. HEPA filter conformance
- c. Respirators
- d. Landfill

MANUFACTURERS DATA:

- a. Vacuum Equipment
- b. Respirators
- c. Solvents
- d. Wetting Agent (Surfactant)
- e. Water Filtration
- f. Hoist System
- g. Disposal Bags
- h. Penetrating Sealant

PROPOSED SCHEDULE:

Submit schedule for asbestos removal to Owner's representative a minimum of 10 days prior to start up.

TRAINING:

Submit documentation that the required training has been conducted. Submit appropriate State licenses, fit testing certificates, and training certificates.

RESPIRATOR PROGRAM:

Submit respirator program per ANSI 288.2, 29 CFR 1910.134 and 29 CFR 1926.58.

Upon completion and during work submit:

Required information on any workers not previously submitted before they are assigned to the site and involved in removal work,

A copy of the daily log signed by the head foreman showing the following data: date, entering and leaving time, description of work done, and reports of events,

Sign-in sheet, a record of all employees and visitors who enter the asbestos control area,

Landfill receipts and transport manifests,

Final Work Area Inspection form (see end of section for form),

Copies of employee air monitoring results relative to OSHA respiratory protection level compliance.

COMPETENT PERSON:

Submit the name and qualifications of the designated competent person.

DEFINITIONS

Amended Water: Water containing a wetting agent or surfactant.

Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos control area and outside the asbestos control area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone of personnel potentially exposed to asbestos.

Asbestos: A group of naturally occurring minerals that separate into fibers. There are six asbestos minerals used commercially: chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

Asbestos Control Area: An area where asbestos removal operations are performed which is isolated by physical boundaries to prevent unauthorized entry of personnel and to prevent the spread of asbestos dust, fibers, or debris.

Asbestos Permissible Exposure Limit: The limit is 0.2 fibers (longer than 5 micrometers) per cubic centimeter of air as an 8-hour time weighted average as determined by Appendix A of 29 CFR 1926.58.

Competent Person: One who is capable of identifying existing asbestos, tremolite, anthophyllite, or actinolite hazards in the workplace and who has the authority to take prompt corrective measures to eliminate them.

Decontamination Enclosure System: A series of connected rooms, with airlocks/curtained doorways between any two adjacent rooms, for the decontamination of workers or of materials and equipment. Decontamination systems shall be contiguous and adjacent to the enclosed asbestos control area.

Equipment Decontamination Enclosure System: A decontamination system for waste materials and equipment, typically consisting of a designated area of the work area, a washroom, and a holding area with airlocks/curtained doorways between any two adjacent rooms. Not to be used for personnel entry/exit.

Friable Asbestos Material: Material that contains more than one percent asbestos by weight which can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable asbestos material is considered hazardous during removal and disposal procedures.

HEPA Vacuum Equipment: High efficiency particulate air (HEPA) filtered vacuuming equipment with a UL 586 filter system capable of collecting and retaining asbestos fibers. Filters shall be of 99.97 percent efficiency for retaining fibers of 0.3 micrometers or larger.

Lockdown: Lockdown is the procedure of applying a protective coating or sealant to a surface from which asbestos-containing material has been removed. Its primary function is to control and minimize airborne asbestos fiber generation that might result from any asbestos-containing residue on the substrate.

Non-friable Asbestos Material: Material that contains asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and may not release fibers in excess of the asbestos permissible exposure limit during any appropriate use, handling, storing, transporting, or processing. Non-friable asbestos material may be hazardous during removal and disposal procedures.

Personnel Decontamination Enclosure System: A decontamination system for personnel, consisting typically of a clean room, a shower room, and an equipment room (dirty change room) with airlocks/curtained doorways between any two adjacent rooms.

Personal Monitoring: Sampling of asbestos fiber concentrations within the breathing zone of an employee to determine the 8-hour time weighted average in accordance with Appendix a of 29 CFR 1926.58. The samples shall be representative of the employee's work tasks. The breathing zone shall be considered an area within 12 inches of the nose or mouth of an employee.

Removal Encapsulant: A manufactured asbestos penetrating encapsulant designed specifically for asbestos removal.

Surfactant (Wetting Agent): A chemical wetting agent added to water to improve penetration. The surfactant shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of one fluid ounce to 5 gallons of water or as specified by the manufacturer. An equivalent surfactant shall be understood to mean a material with a surface tension of 29 dynes/cm as tested in accordance with ASTM D 1331.

Time Weighted Average (TWA): The TWA is an 8-hour time weighted average of airborne concentration of fibers (longer than 5 micro-meters) per cubic centimeter of air which represents the employee's 8-hour workday as determined by Appendix A of 29 CFR 1926.58.

Regulated Area: An area established to demarcate areas where air-borne concentrations of asbestos, tremolite, anthophyllite, actinolite, or a combination of these minerals exceed or can reasonably be expected to exceed the permissible exposure limits. The regulated area may take the form of an enclosed control area or an area demarcated that minimizes the number of personnel who may be exposed to asbestos, tremolite, anthophyllite, or actinolite.

DESCRIPTION OF WORK:

The work covered by this section includes the handling of materials containing asbestos which are encountered during removal and demolition operations and the incidental procedures and equipment required to protect workers and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of the removed asbestos-containing materials. Perform work in accordance with 29 CFR 1926.58, 40 CFR 61, Subparts A and M, and the requirements specified herein. The asbestos work involves the demolition and removal of asbestos-containing roofing materials. Under normal conditions non-friable materials are not considered hazardous; however, these materials release airborne asbestos fibers when sawed, broken, drilled, sanded, crushed, ground or otherwise abraded.

Protection of Existing Work to Remain: Perform demolition work without damage or contamination of adjacent areas. Where such work is damaged or contaminated, restore work to original condition or better.

Medical Requirements: 29 CFR 1926.58.

Medical Examinations: Before exposure to airborne asbestos fibers, furnish asbestos workers with a comprehensive medical examination as required by 29 CFR 1926.58.

Training: Prior to or at time of initial assignment to asbestos work, and at least annually thereafter, each employee shall be instructed with regard to the hazards of asbestos, safety and health precautions, the use and requirements for protective clothing, equipment, and respirators, and the association of cigarette smoking and asbestos-related disease, and the additional requirements of 29 CFR 1926.58. Fully cover engineering and other hazard control techniques and procedures.

Permits and Notifications: Obtain necessary permits in conjunction with asbestos removal, hauling, and disposition, and furnish timely notification of such actions required by federal, state, regional, and local authorities. Notify the regional office of the Environmental Protection Agency (EPA) and the Owner's Representative in writing 10 days prior to the commencement of work in accordance with 40 CFR 61, Subpart M.

Safety and Health Compliance: In addition to detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1926.58 and 40 CFR 61, Subparts A and M. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where specification requirements and referenced documents vary, the most stringent requirement shall apply.

Respirator Program: Establish and implement a respirator program as required by ANSI Z88.2, 29 CFR 1910.134, and 29 CFR 1926.58.

PART 2 PRODUCTS

2.1 MATERIALS

Wetting Materials: For wetting prior to disturbance of asbestos containing materials use amended water:

Amended Water: Provide water to which a surfactant has been added. Use a mixture of surfactant and water which results in wetting of the asbestos containing material and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50 percent polyoxyethylene ester and 50 percent polyoxyethylene ether mixed with five gallons of water.

Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, six mil thick as indicated, clear, frosted, or black as indicated.

Duct Tape: Provide duct tape in 2 inches or 3 inches widths, with adhesive which is formulated to aggressively stick to sheet polyethylene.

Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

Disposal Bags and Impermeable Containers: Provide 6 mil thick leak-tight polyethylene bags. Provide containers suitable to receive and retain asbestos containing or contaminated material until proper disposal. Use one of two types of impermeable containers: (1) 6 mil polyethylene disposal bags to fit within the drum; or (2) metal or fiber reinforced drums with tightly fitting lids. Disposal bags and impermeable containers must be labeled with 2 labels, with text as follows:

First Label: Provide in accordance with 29 CFR 1910.1200(f) of OSHA's Hazard Communication standard:

**DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
BREATHING AIRBORNE ASBESTOS, TREMOLITE, ANTHOPHYLLITE, OR
ACTINOLITE FIBERS IS HAZARDOUS TO YOUR HEALTH**

Second Label: Provided in accordance with DOT regulations:

RQ HAZARDOUS SUBSTANCE SOLID,
N.O.S. (ASBESTOS) ORM/E,
NA - 9188

Disposal Drums: Provide labeled leak tight containers (fiberboard or steel drums) for transportation and disposal of waste. Disposal drums must be labeled in the same manner as specified under "Disposal bags" (see above).

PART 3 EXECUTION

3.1 WORK PROCEDURE

Perform asbestos-related work in accordance with 29 CFR 1926.58, SCDHEC reg. 61-86.1 and as specified herein. Use wet removal procedures. Personnel shall wear and use protective clothing and equipment only as required. Eating, smoking, or drinking shall not be permitted in the asbestos control area or change room. Personnel of other trades not engaged in the removal and demolition of asbestos shall not be exposed at any time to airborne concentrations of asbestos greater than or equal to .01 fibers per cubic centimeter of air. Shut down, lock out, and isolate HVAC systems that supply, exhaust, or pass through the asbestos control areas. Seal intake and exhaust vents in the asbestos control area with 6-mil plastic sheet and tape. Seal seams in HVAC components that pass through asbestos control area.

Disconnect electrical service when wet removal is performed and provide temporary electrical service protected by a ground fault circuit interrupter.

Masking and Sealing:

Asbestos Control Area Requirements for non-friable roofing materials: The construction of an enclosed asbestos control area may not be required for the removal of roofing felts and mastics if proper removal techniques are utilized. Secure all entrances to the work area and maintain other requirements for asbestos control areas. Seal all internal air vents grilles, etc. to prevent possible contamination to these systems. Also, where an enclosure is not provided, the Contractor may be required by OSHA to conduct personal and area air monitoring for airborne asbestos fibers during the work shift at the designated limits of the asbestos work area at a frequency recommended by the air monitoring professional by not less than once every 4 hours. If the quantity of airborne asbestos fibers monitored at any time is greater than or equal to 0.01 fibers/cc of air, stop work, correct the condition(s) causing the increase, and notify the Owner's Representative immediately. If adjacent areas are contaminated, clean the areas, monitor, and visually inspect the area as specified herein.

Asbestos Handling Procedures:

General Procedures: Wet asbestos material with a fine spray of amended water, other approved wetting agent, or a removal encapsulant during removal, cutting, or other handling to reduce the emission of airborne fibers. Remove material and immediately place in sealed impermeable bags. Collect asbestos waste, scrap, debris, bags, containers, equipment, and asbestos-contaminated clothing which may produce airborne concentrations of asbestos fibers; place in sealed impermeable bags constructed of 6-mil plastic sheet. Sealed impermeable bags shall be stored and removed in asbestos waste drums. Provide asbestos caution labels on sealed impermeable bags and asbestos waste drums. Where unusual circumstances prohibit the use of sealed impermeable bags, the contractor shall submit, in the asbestos plan, an alternate proposal for removal of asbestos materials and containment of asbestos fibers.

Non-friable Asbestos Procedures:

Work procedures that will cause dust and airborne asbestos fibers to be released will not be permitted. Asbestos materials shall not be dropped, thrown, nor roughly handled, but shall be carefully handled during all stages of removal. Fiber control methods including wet removal, isolation and partial enclosure of the work area by plasticizing and use of appropriate respirators are strongly recommended as a minimum requirement for removing non-friable asbestos materials such as floor tiles. All hand-operated and power tools used when working with non-friable asbestos materials that could cause airborne asbestos fibers shall be provided with exhaust ventilation systems, in accordance with ANSI 79.2 and 29 CFR 1926.58. During removal, keep asbestos materials wet with water containing an approved wetting agent or surfactant. Wrecking, bulldozing, and similar operations will not be permitted during the removal of asbestos materials.

Monitoring:

Monitoring of airborne concentrations of asbestos fibers shall be in accordance with 29 CFR 1926.58 and as specified herein. As required air monitoring, testing, and reporting shall be performed by a full-time employee of an approved testing laboratory.

Monitoring During Asbestos Work:

Perform personal and area monitoring on characteristic asbestos work tasks and establish the TWA during the first exposure to airborne concentrations of asbestos. When an enclosed asbestos control area is not required, after initial TWA's are established, perform personal monitoring at the designated limits of the asbestos work area.

Site Inspection:

While performing asbestos removal work, the Contractor shall be subject to on-site inspection by the Owner's Representative, who may be assisted by safety or health personnel. If the work is in violation of specification requirements, the Owner's Representative will issue a stop work order to be in effect immediately and until the violation is resolved. Standby time and expenses required to resolve the violation shall be at the Contractor's expense.

Equipment:

Furnish the Owner's Representative with two complete sets of personal protective equipment daily, as required herein, for entry to and inspection of the asbestos control area. The personal protective equipment furnished shall include disposable protective whole body covering, head coverings, gloves, foot coverings, eye protection, and use of the Contractor's change room. The personal protective equipment shall remain the property of the Contractor.

Respirators:

Select respirators approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing asbestos fibers. Type C air supplied respirators will not be required due to the hazard created by the air lines on the roof. Furnish personnel engaged in the removal and demolition of asbestos materials with Powered Air Purifying Respirators equipped with HEPA cartridges, until the industrial hygienist establishes the TWA. Documentation of similar jobs exhibiting fiber counts acceptable for Powered Air Purifying Respirators will be required on site. After the TWA is established, the Contractor shall furnish respirators as presented in 29 CFR 1926.58 as follows:

TIME WEIGHTED AVERAGE OF ASBESTOS IN THE BREATHING ZONE OUTSIDE THE RESPIRATOR

(fibers longer than 5 micrometers per cubic Centimeter of air)

REQUIRED RESPIRATOR

Half-mask air purifying respirator equipped with high-efficiency filters	2.0 or less
Full facepiece air-purifying respirator equipped with high-efficiency filters	2 - 10
Powered air-purifying respirator equipped with high-efficiency filters or supplied-air respirator operated in continuous flow mode	10 - 20
Full facepiece supplied-air respirator operated in pressure demand mode	20 - 200
Full facepiece supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus	greater than 200 or unknown

NOTE: a. Respirators assigned for high environmental concentrations may be used at lower concentrations.

b. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.

Special Clothing:

Protective Clothing: Furnish personnel disposable protective whole body clothing, head coverings, gloves, and foot coverings. Cloth gloves may be worn for comfort, but shall not be used alone. Secure sleeves at the wrists and secure foot coverings at the ankles.

Decontamination Systems: Provide a personnel decontamination system and an equipment decontamination system as described herein. Personnel entry/exit procedures shall be as described in 29 CFR 1926.58. Wastewater shall be collected and disposed of as asbestos-contaminated material or shall be filtered through a filter of at least 0.5 micron particle size collection capability before disposal into the sanitary sewer system. Handle and dispose of filters as asbestos-contaminated waste.

Warning Signs and Labels: Provide caution signs printed in English at approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Provide caution labels printed in English. Affix labels to asbestos materials, scrap, waste, debris, sealed impermeable bags, asbestos waste drums, and other asbestos-contaminated products.

29 CFR 1910.145, paragraph (d) (4), vertical format, minimum 20 by 14 inches; spacing between two consecutive lines shall be at least equal to the height of the upper line. Display the following legend in the lower panel:

<u>Legend</u>	<u>Notation</u>
Danger	1-inch Sans Serif Gothic or Block
Asbestos	1-inch Sans Serif Gothic or Block
Cancer and Lung Disease Hazard	1/4-inch Sans Serif Gothic or Block
Authorized Personnel Only	1/4-inch Gothic
Respirators and Protective Clothing are Required in this area	1/4-inch Gothic

CLEANUP AND DISPOSAL:

Cleanup: Maintain surfaces of the asbestos control area free of accumulations of asbestos fibers. Restrict the spread of dust and debris; keep waste from being distributed over the general area. Do not dry sweep or blow down the space with compressed air. When asbestos removal, disposal, and cleanup are complete, execute copy of final visual inspection form. Do not remove the asbestos control area enclosure (or roped-off perimeter) and caution signs prior to the execution of final visual inspection. The Owner's Representative will visually inspect the affected surfaces for residual asbestos material and accumulated dust before and after the removal of the asbestos control area; the Contractor shall reclean areas showing dust or residual asbestos materials. If recleaning is required, the Owner will deduct the cost for air monitoring during recleaning from the contract sum. Notify the Owner's Representative before unrestricted entry is permitted.

Removal of Asbestos Waste Containers: Store asbestos waste containers in the asbestos control areas until the control area cleanup is complete, or provide a waste container removal system. The waste container removal system shall consist of a loading and unloading staging area, a washdown station inside the asbestos control area, and a waste container holding area. Provide warning signs as specified herein for asbestos control areas. The waste container removal system shall be constructed to prevent the escape of asbestos fibers from the area. Personnel entering the waste container removal system shall wear personal protective equipment. The system shall not be used to enter or exit the work-site. Access to outside the waste container removal system shall be sealed except during the removal of asbestos waste containers. Perform cleanup of the waste container removal system as specified herein for enclosed asbestos control areas. Do not remove the waste container removal system enclosure and warning signs prior to the Owner's Representative's receipt of the final visual inspection certification.

Disposal of Asbestos: Dispose of waste asbestos material (by burial under at least 6 inches of daily compacted cover of non-asbestos materials and by final cover of at least 2 feet of compacted earth) at a state-approved sanitary landfill. Procedure for hauling and disposal shall comply with 40 CFR 61, Subpart M, and state, regional, and local standards. Sealed impermeable bags may be dumped from drums into the burial site unless bags have been broken or damaged. Damaged bags shall be buried in drums. Uncontaminated drums may be recycled. Workers unloading sealed drums shall wear appropriate respirators and personal protective equipment when handling asbestos materials at the disposal site.

FINAL VISUAL INSPECTION FORM

Work area location _____
in accordance with Section 02080. The Contractor hereby certifies that he has visually inspected the Work Area, and has found no dust, debris, or residue.

by: (Signature) _____ Date: _____
(Print Name) _____
(Print Title) _____

CONSULTANT VERIFICATION

The Consultant hereby verifies that he has accompanied the Contractor on his final visual inspection has been thorough and to the best of his knowledge and belief, the Contractor's certification above is a true and honest one.

by: (Signature) _____ Date: _____
(Print Name) _____
(Print Title) _____

END OF SECTION



9711 Southern Pine Boulevard
 Charlotte, NC 28273
 704-940-1830 Fax: 704-555-4929
 NVLAP ID 102075-0

POLARIZED LIGHT MICROSCOPY
 Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Floyd Abrams Company
Client Job Hampton St Annex 12.0103
 PO Box 6136
 Columbia SC 29280

Date Received 3/20/2012
Date Analyzed 3/26/2012

Job Number 1355-00-427

Lab ID:	Sample #:	Appearance	Comments	Asbestos %Type	Non-Asbestos Fibrous %Type	Non-Fibrous %Type
12-4117	C-101	BLACK FIBROUS		ND	20 CELLULOSE	80 OTHER
12-4118A	C-102	BLACK FIBROUS	ROOF	ND	20 CELLULOSE	80 OTHER
12-4118B	C-102	TAN FIBROUS	INSULATION	ND	100 CELLULOSE	
12-4119	C-103	BLACK FIBROUS		ND	20 GLASS	80 OTHER

Analyzed by: Jane Wasilewski
 Additional Comments:

Jane Wasilewski
 Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present in Representative Sample), RCF= (Refractory Ceramic Fibre). The results pertain only to the sample identification above.
 The sample may not be fully representative of the larger material in question. This sheet may not be reproduced except with permission from S&ME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a various material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
12-4120	C-104	BLACK FIBROUS		ND	20 GLASS <1 CELLULOSE	80 OTHER
12-4121	B-105	SILVER/BLACK FIBROUS		15 CHRYSOTILE	10 CELLULOSE 2 GLASS	73 OTHER
12-4122	B-106	SILVER/BLACK FIBROUS		20 CHRYSOTILE	10 CELLULOSE 5 GLASS	65 OTHER
12-4123	B-107	BLACK FIBROUS		2 CHRYSOTILE	45 GLASS	53 OTHER
12-4124	B-108	BLACK FIBROUS		2 CHRYSOTILE	36 GLASS 5 CELLULOSE	58 OTHER
12-4125	C-109	BLACK FIBROUS		ND	20 GLASS	80 OTHER

Analyzed by: Jane Wasilewski
(Signature)
 Additional Comments:

Jane Wasilewski
(Signature)
 Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present in Representative Sample). RCF= (Refractory Ceramic Fiber). The results pertain only to the sample identification above. The sample may not be fully representative of the larger material in question. This sheet may not be reproduced except with permission from SMC, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 800/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a friable material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.

Job Number 1355-00-427

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
12-4126	B-110	BLACK FIBROUS		25 CHRYSOTILE	5 SYNTHETIC	70 OTHER

Analyzed by: Jane Wasilewski

Additional Comments:

Jane Wasilewski
Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present in Representative Sample), RCP= (Refractory Ceramic Fiber). The results pertain only to the sample identification above.
The sample may not be fully representative of the larger material in question. This sheet may not be reproduced except with permission from SME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a resinous material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.



BULK SAMPLE

CHAIN OF CUSTODY RECORD

135-00-427

PROJECT NO.	PROJECT NAME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:			
12.0103	HARDTOWN ST. ANNEX				3/20/12			
FACILITY		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:			
HARDTOWN ST. ANNEX / USC								
SAMPLER(S)		RELINQUISHED BY:	DATE	TIME	RECEIVED BY:			
TAD ASBESTOS								
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
C-101	13-4117		3/16/12					ROOF AREA A
C-102	18							ROOF AREA B
C-103	19							ROOF AREA C
C-104	20							ROOF AREA D
B-105	21							BASE A
B-106	22							BASE B
B-107	23							BASE C
B-108	24							BASE D
C-109	25							ROOF E
B-110	13-4126							BASE E

ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

By signing below, I warrant that I am authorized to enter into this agreement for the client named below, and that I authorize the above analysis subject to the terms and conditions on the reverse hereof.

AUTHORIZED BY: TAD ASBESTOS DATE: 03/16/12

PRINT NAME: TAD ASBESTOS

Analysis charges shall be as included in S&M/E, Inc.'s fee schedule in effect at the time of the analysis.

CLIENT INVOICE INFORMATION		SEND COPIES OF RESULTS TO	
Client Name	Client PO#	Name, Dept.	Co.
GROUP ASBESTOS COMPANY			
Address	City, State, Zip	Address	City, State, Zip
PO Box 6136	COLUMBIA SC 29260-6136		
Phone	FAX	Phone	FAX
803 343 1272	803 343 1274		

WRITE COPY-LABORATORY YELLOW COPY-ACCOUNTING PINK COPY-CLIENT

SAWEE SF-002 A This document was prepared pursuant to a specific agreement to address the unique requirements of an S&M/E client. Prior to further use, an S&M/E professional should be contacted for a complete explanation of its preparation and contents (REV. 6/01)



9711 Southern Pine Boulevard
 Charlotte, NC 28273
 704-940-1830 Fax 704-565-4939
 NVLAP ID 102075-0

POLARIZED LIGHT MICROSCOPY
 Performed by EPA 600/R-93/116 Method

Asbestos Analysis Summary

Client Name Floyd Abrams Company
Client Job CRF DM 1600 Hampton Annex 12.0103

PO Box 6136
 Columbia SC 29260

Date Received 7/11/2012
Date Analyzed 7/12/2012

Job Number 1355-00-427

Lab ID:	Sample #:	Appearance	Comments	Asbestos %/Type	Non-Asbestos Fibrous %/Type	Non-Fibrous %/Type
12-7604A	C70	BLACK FIBROUS	ROOF	ND	5 GLASS	95 OTHER
12-7604B	C70	TAN FIBROUS	INSULATION	ND	99 CELLULOSE	1 PERLITE
12-7605A	B72	BLACK FIBROUS	ROOF	ND	55 GLASS 5 CELLULOSE	40 OTHER
12-7605B	B72	BROWN FIBROUS	INSULATION	ND	100 CELLULOSE	

Analyzed by: Jane Wasilewski
Additional Comments:

Jane Wasilewski
 Laboratory Manager

For heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. ND = None Detected (Asbestos Not Present in Representative Sample), RCs- (Refractory Ceramic Fiber) The results pertain only to the sample identification above.
 The sample may not be fully representative of the larger material in question. This sheet may not be reproduced except with permission from S&ME, Inc. This report may not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. Although Polarized Light Microscopy (PLM/Dispersion Staining) (Method EPA 600/R-93/116) is the specified method for analysis of bulk material samples for asbestos under the EPA Asbestos Hazard Emergency Response Act, there have been reports that this method may not identify asbestos when fiber sizes are extremely small or if they are bound in a retitious material. Such materials include floor tile, mastic and asphaltic roofing. Currently, reanalysis by Transmission Electron Microscopy (TEM) to verify results of <1% or "None Detected" for these materials is recommended.

BULK SAMPLE



CHAIN OF CUSTODY RECORD

1355-00-427

ENGINEERING • TESTING
ENVIRONMENTAL SERVICES

PROJECT NO. 12.0103	PROJECT NAME CRF DT 1600 HARTON ANNEX	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:			
FACILITY CRF DT 1600 HARTON ANNEX	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	<i>[Signature]</i>			
SAMPLER(S) T. AERATS	DATE TAKEN 07/06/12	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:			
SAMPLE #	LAB NUMBER	DATE ANALYZED	ANALYSTS INITIALS	ASBESTOS + N/D	ARCHIVE NUMBER	DATE ARCH	ARCHIVER INITIALS	SPECIAL INSTRUCTIONS
A 70	12-7607							Area F
B 72	12-7605							Area F
								<input type="checkbox"/> Same Day
								<input type="checkbox"/> 24 HR
								<input checked="" type="checkbox"/> 48 HR
								<input type="checkbox"/> 3 - 5 Day
								<input type="checkbox"/> 6 - 10 Day

ALL SAMPLES WILL BE DISPOSED OF AFTER ANALYSIS UNLESS OTHERWISE REQUESTED

By signing below, I warrant that I am authorized to enter into this agreement for the client named below, and that I authorize the above analysis subject to the terms and conditions on the reverse hereof.

AUTHORIZED BY: *[Signature]* DATE: 07/10/12

PRINT NAME: TAP AERATS

Analysis charges shall be as included in S&ME, Inc.'s fee schedule in effect at the time of the analysis.

CLIENT INVOICE INFORMATION		SEND COPIES OF RESULTS TO	
Client Name Egyp AERATS COMPANY T. AERATS	Name, Dept.	Co.	
Client PO#	Address	City, State, Zip	
Address P.O. 8136	Phone	City, State, Zip Columbia SC 29260-6136	
City, State, Zip	FAX	Phone	
Phone 803 343 1272		FAX 803 343 1274	

WHITE COPY - LABORATORY
YELLOW COPY - ACCOUNTING
PINK COPY - CLIENT

SAFETY: SAME SFR-002 A This document has been prepared pursuant to a specific agreement to address the unique requirements of an S&ME client. Prior to further use, an S&ME professional should be contacted for a complete explanation of its preparation and contents.

SECTION 02084

DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Asbestos-containing waste materials and debris which is packaged in accordance with the provisions of this Specification shall be disposed of at designated sanitary landfills at an interval appropriate to prevent accumulation of generated waste onsite.

1.2 RELATED SECTIONS

- 1.2.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.3 SUBMITTALS

- 1.3.1 Refer to Section 01300, Submittals.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

- 3.1.1 Decontaminated and sealed single-bagged waste shall be double-bagged and sealed prior to being removed from the Work Area.
- 3.1.2 All double-bagged and poly-wrapped waste shall be placed into an appropriate lined enclosed vehicle for transportation to the disposal site unless otherwise authorized in writing by the Consultant.
- 3.1.3 The disposal bags shall be labeled as required by 29 CFR 1910.26 and the Department of Transportation Regulations classifying asbestos as a hazardous waste.
- 3.1.4 Carefully load containerized waste on sealed trucks or other appropriate vehicles for transport. Place bundles on a Hy-Lift type fork lift and lower to the transport truck. Palletized handling of sealed and labeled bundles is permissible. Throwing, pitching or dropping bundles on a truck bed from the roof level is expressly and strictly forbidden. Exercise care before and during transport to ensure that no unauthorized persons have access to the material.

- 3.1.5 Do not store containerized material outside of the Work Area. Take containers from the Work Area directly to a sealed truck.
- 3.1.6 Do not transport containerized waste materials on open trucks. Label drums with same warning labels as bags. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this specification.
- 3.1.7 Advise the sanitary landfill operator at least 24 hours in advance of transport of the quantity of material to be delivered.
- 3.1.8 At the landfill site, sealed containers shall be carefully removed from the truck and placed on the ground. Containers shall not be dumped or thrown from the truck.
- 3.1.9 There will be no visible emissions to the outside air from an active waste disposal site where asbestos-containing waste is deposited.
- 3.1.10 Only sealed bags or impermeable containers are permitted to be deposited in landfill. Damaged, broken, or leaking plastic bags must remain in the impermeable container and the container must be deposited in the landfill. Once deposited, the bags and drums are to be covered by a sheet of 6-mil polyethylene sheeting.
- 3.1.11 Retain signed and dated receipts from landfill for materials disposed.

END OF SECTION

DIVISION 6

WOOD

SECTION 06100
ROUGH CARPENTRY

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Install new treated wood nailers and blocking where required.
- 1.1.2 Install new treated wood blocking for retrofit roof drains and new parapet scupper drains.

1.2 RELATED SECTIONS

- 1.2.1 Selective Demolition - Section 02070
- 1.2.2 Bituminous Temporary Roof – Section 07192
- 1.2.3 Rigid Board Insulation - Section 07212
- 1.2.4 Built-Up Asphalt Roofing – Section 07510
- 1.2.5 Sheet metal Flashing and Trim – Section 07620

1.3 ENVIRONMENTAL CONDITIONS

- 1.3.1 Material installation shall proceed only when weather conditions are in compliance with the manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions will be subject to rejection including removal and replacement with new materials at no additional cost to Owner.

1.4 QUALITY ASSURANCE

- 1.4.1 The Contractor shall provide sufficient qualified workmen and supervisors who shall be present at all times during execution of this portion of the work and who shall be familiar with the type of construction involved and the materials and techniques specified.

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Treated Wood: Shall be No. 2 Common Southern Yellow Pine, kiln-dried after treatment to a moisture content of not more than 19 %. Shall be sound, thoroughly seasoned, dressed to nominal finish dimension, and free of warpage, cupping and bowing.

All nailers and other blocking associated with the roofing installation shall be pressure-treated with 0.25 pcf retention of chromate copper arsenate (CCA Type C) as produced by licensed treaters of the Koppers Company or approved equal and shall conform to AWWA Standard C2 above ground. The presence of AWWA quality mark LP-2 on each piece shall be accepted as evidence of conformance to this Specification. Where full penetration of CCA is not evident, field cuts shall be coated in accordance with AWWA Standard M-4. Dimensions are to be determined by job, conditions, and the membrane manufacturer's specifications.

- 2.1.2 Treated Plywood: ½ inch or CCX ¾ inch thick plywood treated to a point of 0.4 pcf with a Wolman CCA preservative.

2.2 ACCESSORIES

- 2.2.1 Nails: Shall be 16-penny, (stainless steel or double hot dipped zinc coated) annular-ring nails, where new nailers are fastened to new or existing nailers. Minimum embedment shall be 1-1/2 inches.
- 2.2.2 Threaded Masonry/Concrete Fasteners: Corrosion resistant, threaded fastener with low profile head, 1-1/4 inches deep embedment, as manufactured by:
- a. Buildex
 - b. Olympic (OMG)
 - c. Powers
 - d. Tru-Fast
- 2.2.3 Threaded Steel/Wood Fasteners: Corrosion resistant, self-tapping, self-drilling screw with low profile head; 1-1/4 inches deep embedment; as manufactured by:
- a. Buildex
 - b. Olympic (OMG)
 - c. Powers
 - d. Tru-Fast
- 2.2.4 Portland Cement Concrete Deck: Corrosion resistant, high magnesium alloy, T.P.R. Peel Rivet 0.250 inch diameter, for through deck installation, as manufactured by Dekfast, SFS Inc. or approved equal.
- 2.2.5 Masonry Expansion Fasteners: Shall be Powers Zamac Nailin drive anchor with Type 304 stainless steel nail ¼" X 2".
- 2.2.6 Fastener for wood blocking on Portland Cement concrete roof: Shall be corrosion resistant, high magnesium alloy, T.P.R. peel rivet 0.0250 inch diameter, for through deck installation, as manufactured by DekFast, SFSintec. or approved equal.

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 Verify that existing wood nailers, blocking, etc., are treated and acceptable for compliance with the membrane manufacturer's warranty requirements.
- 3.1.2 The Owner's representative and the Contractor shall document the actual quantities of materials installed.

3.2 INSTALLATION

- 3.2.1 Treated wood nailers shall be installed at appropriate roof perimeters, curbs, and similar penetrations.
- 3.2.2 All nailers shall be of sufficient thickness so as to be flush with the insulation/membrane interface and securely anchored with the appropriate fasteners at spacing not to exceed 16 inches on center, staggered pattern.
- 3.2.3 New wood nailers, blocking, etc., shall be chamfered, beveled, shaved, planed, or shimmed as necessary to provide smooth transition to adjacent materials.
- 3.2.4 New wood blocking shall be installed to facilitate not less than 8 inches of vertical flashing above finished roof surface as indicated in the detail drawings of this specification.
- 3.2.5 New nominal 6 inch wide wood blocking shall be furnished and installed at all eaves, edges and openings, as required, for blocking to finish flush with the top of the roof insulation.
- 3.2.6 New wood blocking shall be furnished and installed at all roof-mounted equipment, as required, to provide a minimum flashing height of 8 inches above finished roof level.
- 3.2.7 All replacement wood members shall be installed in accordance with performance specifications complying with recommendations from the 1991 National Design Specification for Wood Construction (NDS) published by the American Forest & Paper Association (AF&PA).

END OF SECTION

DIVISION 7

THERMAL AND MOISTURE PROTECTION

SECTION 07192

BITUMINOUS TEMPORARY ROOF

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Install new fiberglass reinforced asphalt base sheet hot mopped in asphalt primed concrete roof deck.
- 1.1.2 Install mopped two ply temporary roof membrane over prepared base sheet.

1.2 RELATED WORK

- 1.2.1 Selective Demolition - Section 02070
- 1.2.2 Rough Carpentry - Section 06100
- 1.2.3 Rigid Board Insulation – Section 07192
- 1.2.4 Built-Up Asphalt Roofing - Section 07510
- 1.2.5 Roof Accessories – Section 07700

1.3 SUBMITTALS

- 1.3.1 The Contractor shall submit manufacturer's physical property data sheets for bitumen and roofing felts, including Material Safety Data Sheets.

1.4 ENVIRONMENTAL CONDITIONS

- 1.4.1 Material installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation is imminent.
- 1.4.2 Materials installed during adverse weather conditions shall be subject to removal and replacement.
- 1.4.3 Asphalt Kettle for temporary roof membrane shall be equipped with a Safety Loading System and Afterburner to reduce emissions from heating asphalt. The Updraft Afterburner and Safety Loader shall be factory installed accessories to ensure OSHA safety compliance. Fume guard, Afterburner/Safety Loader shall be as manufactured by Reeves Roofing Equipment Co., Inc., Garlock Equipment, Cleasby Manufacturing Co., Inc. or approved equal.

1.5 WARRANTY

- 1.5.1 Warranties shall be in accordance with Section 01740, Warranties and Bonds.

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Base Sheet: Shall be glass fiber mat coated with weathering grade asphalt conforming to the requirements of ASTM D 4601, Type II, Tables 1 and 2, Johns Manville PP28-GlasBase, GAF GAFGLAS #75 Base Sheet, MB Base M by Firestone Building Products.
- 2.1.2 Bitumen: Shall be “no smell” air blown asphalt manufactured specifically for roofing purposes conforming to the latest requirements of ASTM D-312, Type III and the membrane manufacturer.
- 2.1.3 Primer: Shall be asphaltic primer conforming to the requirements of ASTM D-41.
- 2.1.4 Temporary Roof Base Plies: Shall be perforated glass fiber mat coated with weathering grade asphalt; GlasPly IV Roofing Felt (John Manville Roofing Systems); GAFGLAS Ply 4 Roofing Felt (GAF Building Materials Corporation); Ply IV Roofing Felt (Firestone Building Products), all conforming to ASTM D 2178-89, Type IV.
- 2.1.5 Roofing Cement: Shall be asphalt-based, non-asbestos fiber roofing cement conforming to the requirements of ASTM D 2822, Type II or III; SS-C-153; Johns Manville Bestile Industrial Roofing Cement, or approved equal.

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 The deck surface shall be smooth, clean, dry, free of debris and all foreign matter prior to application of asphalt primer. All roof surfaces shall be swept and inspected prior to the installation of materials, and surface repairs to concrete roof deck.
- 3.1.2 All holes from former base ply fasteners shall be filled with Zono Patch or Pyrofil and trowled smooth to provide uniform deck surface.
- 3.1.3 Surface of deck shall be free of holes, unbonded or loose skim or slurry coat or another damages caused during demolition.

3.2 INSTALLATION - ASPHALT/FELT TEMPORARY ROOF

- 3.2.1 Contractor shall adhere to the specifications and installation instructions and procedures described herein to be considered minimum requirements for application of materials.

- 3.2.2 Over entire deck surface, install one ply of GlasBase sheet, lapping each sheet a minimum of 2 inches over the preceding sheet. Adhere base sheet in solid mopping of hot Type III **"no smell"** asphalt.
- 3.2.3 Over base sheet, install one ply of Type IV roofing felt in solid uniform 23-45 lbs/square mopping of **"no smell"** hot asphalt.
- 3.2.4 Install one additional ply of Type IV roofing felt offsetting sidelaps 16-20 inches from side laps of the base ply in a solid uniform 20-30 lbs/square mopping of **"no smell"** hot asphalt.
- 3.2.5 Extend temporary roof at all vertical surfaces at least 4 inches.
- 3.2.6 Seal edge of temporary roof in asphalt roof cement at all roof penetrations.
- 3.2.7 Glaze the entire roof surface with a uniform 10-15 lbs/square surface mopping of **"no smell"** hot asphalt.

END OF SECTION

SECTION 07212

RIGID BOARD INSULATION

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Install new UL Fire Resistant Class A perlite roof insulation and factory tapered perlite roof insulation to receive the asphalt built-up roof (BUR) assembly.
- 1.1.2 Install new UL Fire Resistant Class A factory tapered polyisocyanurate roof insulation to provide positive slope for roof drainage as indicated on roof plan sheets.
- 1.1.3 Install new ½ inch overlayment insulation board to receive asphalt BUR.
- 1.1.4 Install new ½ inch HD wood fiberboard insulation and tapered insulation.

1.2 RELATED WORK

- 1.2.1 Rough Carpentry - Section 06100
- 1.2.2 Bituminous Temporary Roof - Section 07192
- 1.2.3 Built-Up Asphalt Roofing – Section 07510

1.3 SUBMITTALS

- 1.3.1 Submittals shall be in accordance with Section 01300 of this Specification.

1.4 ENVIRONMENTAL CONDITIONS

- 1.4.1 Material installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation is imminent.
- 1.4.2 Installation of hot mopped insulation and tapered insulation shall not commence until ambient air temperature is 40 degrees Fahrenheit and rising.
- 1.4.3 Materials installed during adverse weather conditions shall be subject to removal and replacement with new materials at no additional cost to Owner.
- 1.4.4 For steel roof deck areas, mechanically fasten 5/8 inch Type X Securock Insulation and base layer of fill and/or tapered insulation.
- 1.4.5 Asphalt kettle for temporary roof membrane shall be equipped with a Safety Loading System and Afterburner to reduce emissions from heating asphalt. The Updraft Afterburner and Safety Loader shall be factory installed accessories to ensure OSHA safety compliance. Fume Guard, Afterburner/Safety Loader shall

be as manufactured by Reeves Roofing Equipment Co., Inc., Garlock Equipment, Cleasby Manufacturing Co., Inc. or approved equal.

1.5 QUALITY ASSURANCE

- 1.5.1 Qualifications of the Manufacturer: Products used in the work of this Section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Consultant.
- 1.5.2 Qualifications of the Installers: Use adequate numbers of skilled workman who are thoroughly trained and experienced in the necessary crafts and are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this section.

1.6 SHOP DRAWINGS

- 1.6.1 Submit shop drawings for the insulation system, indicating layout of tapered insulation by board size and dimensions, as well as location and fill material.
- 1.6.2 Manufacturer's shop drawings are acceptable provided no deviations from same are incurred.

1.7 STORAGE AND HANDLING

- 1.7.1 Store materials dry in accordance with specifications.
- 1.7.2 Storage of insulation on adjoining sections of reroof area shall be permitted provided material is located as to prevent structural overload or impede roof drainage.

1.8 WARRANTY

- 1.8.1 Refer to Section 01740, Warranties and Bonds.

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Monolithic Mineral Perlite Tapered Roof Insulation: ASTM C 728-82. Perlite insulation shall be manufactured by Johns Manville Sales Corporation, or approved equal. Minimum thickness for tapered stock shall be 1/2 inch. This is based on "standard" 1/8 inch/foot and 1/4 inch/foot tapered system.
- 2.1.2 Monolithic Mineral Perlite Roof Insulation: ASTM C 728-82. Overlay insulation shall be 1/2 inch thick as manufactured by Johns Manville Sales Corporation, or approved equal. Crickets shall be constructed with 1/2 inch/foot or 1 inch/foot as indicated on plan sheets.
- 2.1.3 Roof Insulation and Tapered Board: Shall be Knight-Celotex Structodek high density wood fiberboard. Structodek conforms to ASTM C 208, Type II, Grade 1

and Grade 2, ASTM C 209.

- 2.1.4 Underlayment: Shall be USG Type X 5/8 inch thickness Securock fiberglass faced, silicone treated gypsum core 4 feet x 8 feet board conforming to ASTM E84, FORK Class 1.
- 2.1.5 Polyisocyanurate Insulation and Tapered Insulation: Shall comply with ASTM C1289-08, Type II, Class 2, Grade 2. Also conforming to Factory Mutual Class 1 insulation, UL listed and labeled Class A, UL Standard 790 and Section 2603 foam plastic insulation of IBC. Each board shall be faced with coated polymer-bonded glass fiber mat facers on both major surfaces of the core foam. Minimum thickness shall be ½ inch. Taper shall provide minimum 1/8 inch and 1/4 inch per foot slope.
- 2.1.6 Tapered Insulation shall be fabricated with 1/8 inch per foot slope and 1/4 inch per foot slope. Minimum thickness of tapered stock shall not be less than ½ inch. Tapered crickets shall provide ½ inch and 1 inch per foot slope, as indicated on roof plan sheets. Sumps at roof drains shall be 4 feet x 4 feet x ½ inch.
- 2.1.7 Contractor has option to install tapered polyisocyanurate insulation with ½ inch wood fiberboard overlayment board or tapered perlite over polyisocyanurate thermal insulation.
- 2.1.8 Screws and Plates for Polyisocyanurate Insulation: Shall be FM 1-90 approved No. 12 – 4 inches Rawl Deck Screw with Perma-Seal coating and 3 inch G90 hot dipped galvanized steel plates. Fastener pattern shall conform with International Building Code and as listed (paragraph 3.2.3). Screw length shall be determined by insulation thickness to ensure penetration through steel deck top flange only.
- 2.1.9 Roof Overlay Board: Shall be Knight-Celotex Structodek ½ inch high density wood fiberboard. Structodek conforms to ASTM C 208, Type II, Grade 1 and Grade 2, ASTM C 209.
- 2.1.10 Cant Strips: ASTM 208-82, Class C, wood fiberboard 2 inches x 5 ½ inches cut to fit at 45 degrees with 5-1/2 inches face.
- 2.1.11 Primer: Shall be asphaltic primer conforming to the requirements of ASTM D 41.
- 2.1.12 Bitumen: Shall be “no-smell” air blown asphalt manufactured specifically for roofing purposes; Asphalt, Flat Grade: ASTM D 312-84, Type III.
- 2.1.13 Roofing Cement: Shall be Johns Manville Bestile Industrial Roof Cement conforming to the requirements of ASTM D 4586, Type I or approved equal.

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 Inspect roof deck to verify surface preparation.

- 3.1.2 The temporary roof surface shall be smooth, clean, dry, and free of debris and all foreign matter prior to receiving polyisocyanurate and tapered perlite insulation.
- 3.1.3 The deck surface shall be smooth, clean, dry, and free of debris and all foreign matter prior to receiving vermiculite lightweight concrete roof primer. All roof surfaces shall be swept and inspected prior to the installation of materials, and application of new materials will constitute approval of the surface by the Contractor.
- 3.1.4 Out-of-service roof openings shall be covered with Securock Fireguard Roof Insulation to receive new tapered insulation and asphalt BUR membrane. Securock Fireguard shall be 5/8 inch thickness, minimum.

3.2 INSTALLATION

- 3.2.1 Contractor shall adhere to the specifications and installation instructions and procedures described herein to be considered minimum requirements for application of materials.
- 3.2.2 Install 5/8" Type X roof underlayment over steel roof deck with minimum five (5) fasteners per board (4 feet x 8 feet board).
- 3.2.3 Wind uplift resistance for insulation fasteners shall comply with Standard Building Code Council and International Conference of Building Officials, latest edition. Field Pressure - 40 psf; Perimeter Pressure - 70 psf; and Corner Pressure - 100 psf. Fastener pattern, spacing shall provide the above minimum protection. Contractor shall provide roofing materials manufacturers approved test results data.
- 3.2.4 Perlite or wood fiberboard overlay insulation shall be solid mopped to polyisocyanurate insulation.
- 3.2.5 Tapered roof insulation shall be solid mopped to perlite or polyisocyanurate insulation. Tapered insulation shall be Mineral Perlite Roof Insulation mopped to base insulation. Insulation assembly shall be as approved by Factory Mutual 1-90 testing. Roofing materials manufacturer shall be required to provide confirmation of approval for this installation specification.
- 3.2.6 Install no more insulation than can be completely dried-in with membrane in the same day. Contractor shall strictly conform to this requirement.
- 3.2.7 All masonry surfaces shall be primed full strength with asphalt.
- 3.2.8 Perlite insulation or polyisocyanurate insulation shall be installed in hot mopping of Type III asphalt to base sheet.
- 3.2.9 Perlite overlay insulation shall be solid mopped to polyisocyanurate insulation.
- 3.2.10 Tapered roof insulation shall be solid mopped to perlite or polyisocyanurate

insulation. Tapered insulation shall be Mineral Perlite Roof Insulation mopped to base insulation. Insulation assembly shall be as approved by Factory Mutual 1-90 testing. Roofing materials manufacturer shall be required to provide confirmation of approval for this installation specification.

- 3.2.11 Polyisocyanurate fill insulation shall be installed in solid mopping of Type III asphalt over temporary roof.
- 3.2.12 One-half (1/2) inch perlite overlay insulation board shall be solid mopped to tapered polyisocyanurate. All joints shall be staggered from polyisocyanurate boards
- 3.2.13 Install no more insulation than can be completely dried-in with membrane in the same day. Contractor shall strictly conform to this requirement.
- 3.2.14 Install insulation board in hot Type III asphalt at rate necessary to insure 100 percent adhesion of insulation, but not less than 33 pounds per square.
- 3.2.15 Install 1/2 inch wood fiberboard overlay insulation in solid mopping of hot Type III asphalt to receive BUR.
- 3.2.16 Tapered insulation shall be laid in parallel courses with joints staggered. Where more than one layer of insulation is used, joints shall be staggered from underlying layer, with each layer firmly adhered to the previous layer. Tapered insulation shall be sloped 1/8 inch or 1/4 inch per foot, or 1/8 inch per foot as designated on roof plan.
- 3.2.17 Adjacent insulation boards shall be tightly butted, with gaps greater than 1/8 inch filled by cutting out enough material to allow placement of a minimum three inch wide piece of similar insulation. All insulation board joints shall be staggered.
- 3.2.18 Construct cricket at roof curbs with 1/2 inch or one inch per foot using similar insulation on up-slope side of all curbed units to ensure positive drainage.
- 3.2.19 Board-to-board height variations greater than 1/16 inch at top surface of insulation shall be shaved to provide a smooth transition between board surfaces.
- 3.2.20 Wet insulation shall not be acceptable and will be removed and replaced by the Contractor.
- 3.2.21 For roof drain sumps, 4ft. x 4ft. x 1/2 inch slope. All insulation shall be perlite or wood fiberboard from roof deck to roof membrane.
- 3.2.22 For parapet scupper drains, perlite or wood fiberboard shall be installed as scupper sump +/- 4ft. x 2ft. x 1/2 inch.
- 3.2.23 Mechanically fasten USG Securock underlayment in galvanized steel and former roof curb deck closure steel roof deck closure pans with FM approved deck screws and 3 inches galvalume plates. Deck screen shall be #12 / 1-1/2 inches installed in accordance with FM 1-90 wind uplift testing.

END OF SECTION

SECTION 07510

BUILT-UP ASPHALT ROOFING

PART I GENERAL

1.1 WORK INCLUDED

- 1.1.1 Install new 3 ply fiberglass reinforced felt asphalt built-up roof with Fire Rated modified bitumen cap sheet.
- 1.1.2 Installation of ply sheets and modified bitumen flashing membrane.
- 1.1.3 Installation of preformed roof walkway protection pads.

1.2 RELATED SECTIONS

- 1.2.1 Rough Carpentry - Section 06100
- 1.2.2 Bituminous Temporary Roof – Section 07192
- 1.2.3 Rigid Board Insulation - Section 07212
- 1.2.4 Sheet Metal Flashing and Trim - Section 07620
- 1.2.5 Roof Specialties and Accessories - Section 07700
- 1.2.6 Sealants and Caulking – Section 07920

1.3 SUBMITTALS

- 1.3.1 Refer to Section 01300, Submittals and 01340, Shop Drawings, Product Data, and Samples.

1.4 QUALITY ASSURANCE

- 1.4.1 Standards: Comply with standards specified in this section and as listed in the General Requirements.
- 1.4.2 Qualification of Manufacturer: Products used in the work included in this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Owner.
- 1.4.3 Qualifications of Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this section. As a minimum, the roofing foreman and the membrane applicator shall be certified and trained by membrane manufacturer and shall be experienced in the application of the specified membrane system. Written certification must be provided.

1.5 ENVIRONMENTAL CONDITIONS

- 1.5.1 Materials installation shall proceed only when weather conditions are in compliance with the applicable manufacturer's recommendations for installation and no precipitation imminent.
- 1.5.2 Installation of BUR assembly shall not commence until ambient air temperature is 40 degrees Fahrenheit and rising.
- 1.5.3 Materials installed during adverse weather conditions shall be subject to removal and replacement.
- 1.5.4 Asphalt Kettle shall be equipped with a Safety Loading System and Afterburner to reduce emissions from heating asphalt. The Updraft Afterburner and Safety Loader shall be factory installed accessories to ensure OSHA safety compliance. Fume guard, Afterburner/Safety Loader shall be as manufactured by Reeves Roofing Equipment Co., Inc., Garlock Equipment, Cleasby Manufacturing Co., Inc. or approved equal.

1.6 WARRANTY

- 1.6.1 Refer to Section 01740, Warranties and Bonds.

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

- 2.1.1 Johns Manville Roofing Systems
- 2.1.2 GAF Building Materials Corporation
- 2.1.3 Firestone Building Products

2.2 MATERIALS

- 2.2.1 Sheathing Paper: Shall be rosin sized sheathing paper conforming to ASTM D 549.
- 2.2.2 Fiberglass Roofing Ply Sheets: Shall conform to ASTM D 2178, Type VI, Table 1 and 2; Johns Manville GlasPly Premier by Johns Manville Roofing Systems; GAFGLAS Ply 6 by GAF Building Materials Corporation; or approved equal.
- 2.2.3 Bitumen: Shall be **no-smell** air-blown asphalt manufactured specifically for roofing purposes conforming to the latest requirements of ASTM D-312, Type III and the membrane manufacturer.
- 2.2.4 Modified Bitumen Cap Sheet: Shall be SBS modified bitumen, mop grade, consisting of heavy duty polyester or fiberglass reinforcing mat with modified asphalt granular surface conforming to ASTM D 6164, Type I or II, Grade G or

ASTM D 6163 Type I Grade G. Cap sheet shall be Johns Manville JM DynaGlas FR; GAF Materials Corporation Ruberoid Mop 170 FR; Firestone Building Products SBS Premium FR (White) or approved equal.

- 2.2.5 Modified Bitumen Base Flashing: Shall be a styrene-butadiene-styrene (SBS) modified membrane, mop grade, consisting of laminated with modified asphalt granular surface conforming to ASTM D 6221, Type I; Johns Manville DynaFlex; GAF Ruberoid Mop Plus, Firestone Building Products SBS Glass FR or approved equal; all as tested, classified, and labeled by U.L.
- 2.2.6 Cold Application Adhesive Cap Sheet conforming to ASTM 3019 Type III, Grade 2: Shall be Johns Manville Cold Application FM Adhesive, GAF Matrix 103 Cold Processed Adhesive, or approved equal. Cold application adhesive is use in adhering bitumen cap sheet membranes in temperatures between 40 and 100°F (4 and 38°C). If the temperature is below 50°F (10°C), the adhesive must be stored in a warm area, approximately 70°F (21°C). MBR Cold Application Adhesive must be installed with a notched squeegee or trowel. Average coverage per ply is 1.5 to 2.0 gallons per square (0.61 to 0.82 liters/m²).
- 2.2.7 Flashing Cement: Shall be Johns Manville Bestile Industrial Roof cement conforming to the requirements of ASTM D 4586, Type I or approved equal.
- 2.2.8 Walkway Protection Pad: Shall be Johns Manville DynaTred Plus 32 inches x 32 inches x 3/8 inch color Black/White, or approved equal.
- 2.2.9 Plumbing Vent Flashing: Shall be 4 lb soft lead sheet, ASTM B 29, one piece preformed for 1-1/2 inch to 4 inch pipe with 12 inch height.
- 2.2.10 Asphalt Primer: Shall be asphaltic primer conforming to the requirements of ASTM D 41.
- 2.2.11 Cant Strips: ASTM 208-82, Class C, wood fiberboard 2" by 5-1/2", cut to fit at 45 degrees with 5-1/2 inch face.
- 2.2.12 Flexible Vinyl Flashing for Scupper Drain, Gravel Stop, Door Sill: Shall be Lexsuco RF flashing, 40 mil thickness, 12 inches X 50 feet. Hot air welded seams (3 inches) shall be installed at laps or seams.
- 2.2.13 Flexible Vinyl Flashing for Coping Cap: Shall be Lexsuco PVC water barrier 20 mil thickness and width as required. Lap or splice adhesive shall be Lexsuco CA-103.
- 2.2.14 Termination Bar: Shall be Aluminum Alloy 6061-T6, 1/8 inch x 1 1/4 inch, pre-punched for fastening 6 inches on center. Fasteners for termination bar at masonry shall be stainless steel Powers Mushroom Head Zamac Nailer (1/4 inch by 1-1/2 inch).
- 2.2.15 Roof Drain Lead Flashing: Shall be minimum 4 lb per square foot soft sheet lead conforming to ASTM B 29, size 36 inches x 36 inches.
- 2.2.16 Pitch Pan System: Shall be Weather-Tite Lockin' Pockets Inter-Locking Pitch

Pocket System manufactured by WTT Systems, LLC Chagrin Falls, OH 44023 (866) 868-0883. Sizes shall be either 6 inches or 8 inches square.

2.2.17 Fill for Pitch Pan System: Shall be Weather-Tite Hurricane Force® Universal Sealer manufactured by WTT Systems, LLC.

2.2.18 PermaFlash System for Pipe and Miscellaneous Roof Penetration Flashing: Shall be PermaFlash system a Johns Manville designed multi-ply system of two part adhesive/ cement primer, scrim providing flexibility in waterproof difficult roof penetration flashings. System shall be Johns Manville PermaFlash system incorporating the following products:

- 2.2.17.1 MBR Flashing Cement Base
- 2.2.17.2 MBR Cement Activator
- 2.2.17.3 MBR Flashing Cement Cartridge
- 2.2.17.4 PermaFlash Primer
- 2.2.17.5 PermaFlash Scrim

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 Do not proceed with roofing until all vents, curbs, blocking, nailing strips, and projections through the roof deck have been installed.
- 3.1.2 Verify insulation surface is smooth, clean, rigid and free from debris, projections, holes, etc. which may adversely affect the membrane application.
- 3.1.3 Verify proper securement of the insulation boards and that no cracks in the insulation exist greater than 1/8 inch; all joints to be sealed prior to installing membrane system.
- 3.1.4 Verify wood blocking is secure for installation of flat expansion joint.

3.2 INSTALLATION

- 3.2.1 The Contractor shall strictly adhere to the applicable manufacturer's specifications for installation unless otherwise specified. Instructions and procedures described herein are to be considered minimum requirements for application of materials.
- 3.2.2 Do not apply materials on wet or damp surfaces, over dust, dirt, or other foreign matter.
- 3.2.3 Installation specification is based on three (3) ply construction with a granular surface cap sheet in accordance with manufacturer's specifications 4FID-CA with GlasPly Premier Type VI Felts by Johns Manville Roofing Systems; or equal specifications by approved manufacturer.
- 3.2.4 Provide kettle with accurate working thermometer or provide kettle operator with a hand thermometer. When using a hand thermometer, take the kettle temperature

at the farthest point from burners or at draw-off spigot.

- 3.2.5 Hot asphalt dispensing machine may be used employing "drop chain" to spread asphalt.
- 3.2.6 Felts of 12 inches, 24 inches, and full width shall be used as starting felts in appropriate locations and full felts shall lap preceding felts by 24-2/3 inches, giving a minimum head lap of 2 inches. **Felt laying lines shall be indicated by Contractor applied chalk lines.**
- 3.2.7 Prime all metal and masonry surfaces to receive hot bitumen and cement using approximately one gallon of primer per 100 square feet of surface. Allow primer to dry thoroughly before applying bituminous materials.
- 3.2.8 All roofing plies shall be solid mopped in place. Felt laying devices or machines will not be used.
- 3.2.9 All plies shall be hand broomed into place as they are applied to insure felt makes full contact with asphalt. **Foot traffic is not permitted on roofing felts until asphalt interply has cooled.** Asphalt shall extend beyond edge of lap minimum of 1/2 inch.
- 3.2.10 Install in all valleys and on ridge one additional ply of Type VI roofing felt in solid mopping of hot asphalt.
- 3.2.11 Roofing felts shall be kept within 6 feet of the hot asphalt. Whenever possible, the entire roll shall be applied in a continuous manner.
- 3.2.12 Install cant at locations where membrane transitions from horizontal to vertical. Set cant in continuous bed of flashing cement on both horizontal and vertical surfaces. All roofing felts shall be cut off approximately 2 inches above the top of all cants.
- 3.2.13 After inspection of three ply installation, verify all laps are bonded, penetrations are watertight. Install light glaze coat over felts to seal surface of roof. Glaze coat shall be evenly spread using squeegee, mop to provide uniform seal.
- 3.2.14 Cold application adhesive shall not proceed until glaze coat has cured.
- 3.2.15 Water cut-offs shall be provided at the end of each day's work to completely seal off the materials from possible moisture penetration. Protect edges and incomplete flashings against water entry at all time. Remove cutoffs and temporary protection prior to resumption of work.
- 3.2.16 If asphalt is provided with technical data posted on cartons or in a separate document, that data shall govern temperature. If such information is not provided, the following shall govern:
 - 3.2.16.1 At point of application: Equiviscous temperature plus or minus 25

degrees Fahrenheit (25°F).

3.2.16.2 Maintain kettle temperature 50 degrees Fahrenheit (50°F) below Flash Point.

3.2.16.3 Kettle temperature shall not be kept at or above the Finish Blowing Temperature for more than two hours.

3.2.17 Check roof surface carefully for damage and application defects and make appropriate repairs and corrections prior to application of roof surfacing.

3.2.18 Completed roof covering must comply with the requirements of Underwriter's Laboratories, Inc. for a Class A roof covering.

3.2.19 Cut cap sheet into manageable lengths 12 feet or 18 feet prior to installation. Allow to relax and flatten granular surface down approximately 30 minutes. Maintain 3 inches side laps and 6 inches end laps.

3.2.20 Modified bitumen cap sheet shall be installed over three ply asphalt BUR fully adhered with cold application adhesive. Cold application adhesive may be applied to BUR membrane with spray equipment, notched trowel or notched squeegee. Average application rate is 1.5 gallons to 2.0 gallons per square.

3.2.21 Hand broom cap sheet or roll with steel roller to fully embed cap sheet and laps into cold application adhesive to achieve 100% adhesion.

3.2.22 Contractor shall have adequate fire extinguishers on roof at mixer and at application site.

3.2.23 Place subsequent sheets such that all side laps are down-slope laps. Side laps shall be 2 inches minimum; end laps shall be 6 inches minimum.

3.2.24 Side laps and end laps shall be completed with heat welded 2 inches width minimum.

3.2.25 Contractor shall restrict foot traffic on installed cap sheet for minimum 24 hours to allow adhesive to cure and to minimize bleed out and unsightly tracking.

3.3 BASE FLASHING INSTALLATION

3.3.1 Prior to application of base flashing to galvalume steel, masonry or steel curb, apply primer and allow to thoroughly dry.

3.3.2 Apply a full ply width (+/- 39 inches) of Type VI fiberglass roofing felt in steep grade asphalt without voids, extending at least 4 inches on roof, up the face of the cant to the top of vertical surface.

3.3.3 Over the Type VI felt, apply a second ply of Type VI felt in steep grade asphalt, without voids, and extending above the top of first ply and on to roof 8 inches beyond cant strip. Lap and cement ends 3 inches minimum.

3.3.4 Pre-cut DynaFlex granule surface flashing membrane into maximum 3 feet

lengths, allowing for minimum 3 inch side lap and minimum 9 inch extending onto field of roof. Install in full mopping of hot asphalt.

- 3.3.5 Flashing membrane shall be terminated at top of curb, parapet, or masonry substrate, wood nailer 6 inches on center maximum or with termination bar as detailed.
- 3.3.6 Flashing membrane shall conform tightly to vertical and inclined surfaces. Bridging, sagging, air pockets, or voids will not be accepted.
- 3.3.7 All vertical laps shall receive application of roofing cement and 4 inches wide mesh reinforcing.
- 3.3.8 At all laps coat exposed roofing cement with two (2) coats of asbestos free aluminum roof coating. Aluminum coating shall not be installed until roofing cement solvent has "flashed off".
- 3.3.9 Extend all flashing minimum of 8 inches above the finish roof surface and minimum of 8 inches onto horizontal roof surface.
- 3.3.10 All corners shall be reinforced with a hand-cut piece of modified bitumen membrane in the shape of an oval to adequately cover the lapped joint at the corner.

3.4 WALKWAY PROTECTION

- 3.4.1 Install DynaTred Plus walk pads with MBR utility cement. All four corners of each pad shall be fully adhered.
- 3.4.2 Provide minimum 1 inch clearance between pads for drainage.

3.5 SCUPPER FLASHING

- 3.5.1 Prior to installation of membrane and cap sheet, prime metal scupper flange and scupper tube +/- 8 inches.
- 3.5.2 Set primed scupper in solid bed of roofing cement over Lexsuco RF vinyl flashing.
- 3.5.3 Install 2 plies of Type VI roofing felt over primed metal, extending 4 inches and 8 inches onto roof membrane.
- 3.5.4 Complete counterflashing scupper with granule surface modified bitumen cap sheet.
- 3.5.5 Counterflash scupper and stone coping with +/- 6 inches width Permflash flashing system

3.6 ROOF DRAIN FLASHING

- 3.6.1 Install 2-ply Type VI fiberglass reinforced roofing felt fully bedded in roofing

cement. Plies shall extend from minimum 1 inch inside clamping ring to 6 inches and 9 inches beyond drain body over roof insulation.

- 3.6.2 Prime top and bottom surface of lead flashing sheet full strength.
- 3.6.3 Set lead flashing sheet in a solid bed of flashing cement over the stripping plies.
- 3.6.4 Roofing felts shall be extended across drain. Felts shall be cut across drain body opening and felts trimmed flush with inside face of drain body.
- 3.6.5 Extend cap sheet under clamping ring +/- 1-1/2 inches.

3.7 GRAVEL STOP FLASHING

- 3.7.1 Prior to installation of cap sheet, prime metal gravel stop flange.
- 3.7.2 Set primed gravel stop in solid bed of roofing cement over Lexsuco RF 40 PVC flashing membrane.
- 3.7.3 Install 2 plies of Type VI roofing felt over primed metal, extending 16 inches and 12 inches onto roof membrane.
- 3.7.4 Complete counterflashing gravel stop with one 12 inches width of granule surface modified bitumen or cap sheet full width.

3.8 PARAPET FLASHING

- 3.8.1 Prior to application of parapet flashing apply primer full strength to masonry substrate.
- 3.8.2 Apply a full width ply (+/- 39 inches) of Type VI fiberglass roofing felt in steep grade asphalt without voids, extending at least 4 inches on roof, up the face of the cant to the top of vertical surface.
- 3.8.3 Over the Type VI felt, apply a second ply of Type VI felt in steep grade asphalt, without voids, and extending above the top of first ply and on to roof 8 inches beyond cant strip. Lap and cement ends 3 inches minimum.
- 3.8.4 Pre-cut DynaFlex granule surface flashing membrane into maximum 3 feet lengths, allowing for minimum 3 inch side lap and minimum 9 inch extending onto field of roof. Install in full bed of steep grade asphalt.
- 3.8.5 Flashing membrane shall be terminated at top of masonry substrate, wood nailer 6 inches on center maximum or with termination bar as detailed.
- 3.8.6 All vertical laps shall receive application of roofing cement and 4 inches wide mesh reinforcing.
- 3.8.7 At all laps coat exposed roofing cement with two (2) coats of asbestos free aluminum roof coating. Aluminum coating shall not be installed until roofing

cement solvent has "flashed off".

- 3.8.8 Flashing membrane shall conform tightly to vertical and inclined surfaces. Bridging, sagging, air pockets, or voids will not be accepted.
- 3.8.9 For extended height parapet flashing, terminate base layer at 12 inches height. Subsequent plies of felt and modified bitumen shall counterflash (overlap) terminate 6 or +/- 3 inches and extend to top of parapet installed in solid bed of roofing cement. Terminate at top 6 inches o.c..

END OF SECTION

SECTION 07620

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Installation of new sheet metal counterflashing.
- 1.1.2 Installation of new sheet metal out-of-service roof penetration deck closure pans
- 1.1.3 Installation of new sheet metal gravel stop
- 1.1.4 Installation of new sheet metal coping cap.
- 1.1.5 Installation of sheet metal penetration flashing.
- 1.1.6 Installation of new sheet metal gutter and downspout.
- 1.1.7 Installation of new stainless steel splash pan.
- 1.1.8 Installation of sheet metal and downspouts.
- 1.1.9 Installation of new stainless steel sheet metal parapet scupper drain.
- 1.1.10 Installation of new sheet metal parapet secondary scupper drain.
- 1.1.11 Installation of new galvanized steel roof deck for out-of-service roof hatch curb openings and steel angle to support deck.
- 1.1.12 Installation of new stainless steel door sill flashing.
- 1.1.13 Installation of new sheet metal pelican hood flashing.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- 1.2.1 Rough Carpentry - Section 06100
- 1.2.2 Built-Up Asphalt Roofing - Section 07510
- 1.2.3 Roof Accessories - Section 07700

1.3 QUALITY ASSURANCE

- 1.3.1 Qualifications of the Manufacturer: Products used in the work of this section shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Consultant.

- 1.3.2 Qualifications of the Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this section.

1.4 SHOP DRAWINGS

- 1.4.1 Submit shop drawings in accordance with specifications.
- 1.4.2 Indicate material profile, jointing pattern, jointing details, fastening methods, and installation details.

1.5 SUBMITTALS

- 1.5.1 Submit to Consultant a 12-inch length of each sheet metal configuration prior to fabrication. The Contractor shall verify existing field conditions. Minor dimensional detail changes may be required to fit existing conditions. Sheet metal shall match color and finish of roofing panels specified in Section 07610.

1.6 STORAGE AND HANDLING

- 1.6.1 Store materials dry in accordance with Specifications.
- 1.6.2 Stack material to prevent twisting, bending, or abrasion.
- 1.6.3 During storage prevent material contact with any substance that would discolor or stain, including soil and water.

1.7 SCHEDULING

- 1.7.1 All new sheet metal work shall be closely coordinated with the installation of the new roofing membrane.
- 1.7.2 New sheet metal shall be installed directly after roofing work such that roofing terminations will not be left unprotected.

1.8 GUARANTEE

- 1.8.1 All new materials and workmanship covering work provided under this section of the specifications shall be guaranteed in writing by the contractor to maintain all sheet metal flashing in a watertight condition without cost to the Owner for a period of two (2) years after date of final payment.

PART 2 PRODUCTS

2.1 SHEET METAL MATERIALS

- 2.1.1 Sheet metal for flashing shall be 24 gage steel coated both sides with a layer of galvalume aluminum zinc alloy (approximately 55% aluminum, 45% zinc) applied by continuous hot drip method. Minimum 0.55 ounce coated weight per square

foot as determined by the triple spot test per ASTM A-792.

- 2.1.2 Counterflashing, Gravel Stop, Coping Cap: Shall be formed from 24 gage galvanized steel sheets, conforming to ASTM A-446 with Kynar 500/Hylar 5000 fluoropolymer coating, color as selected by Owner.
- 2.1.3 Electrical Conduit Flashing: Shall be S.B.C. Industries stainless steel flashing units for hot pipe penetrations, electrical conduit. Units shall be "D" series models, constructed of stainless steel, 26 gage, Type 304-2B finish.
- 2.1.4 Parapet Scupper Trim, Conductor Head, Downspout, Gutter: Shall be formed from 24 gage galvanized steel sheets, conforming to ASTM A-446 with Kynar 500/Hylar 5000 fluoropolymer coating, color as selected by Owner.
- 2.1.5 Termination Bar: Shall be Aluminum Alloy 6061-T6, 1/8 inch x 1 1/4 inches. Fasteners for termination bar at masonry shall be stainless steel Rawl Mushroom Head Zamac Nailer (1/4 inch by 1-1/2 inch).
- 2.1.6 Out of Service Roof Deck Closure Pan: Shall be formed from 18 gage galvanized steel sheets. All seams shall be welded with welds treated to prevent corrosion and/ or deterioration.
- 2.1.7 Hot Pipe Flashing: Shall be SBC Industries Pipe Flashing, Model PI/D. Type 302/304 Mill Rolled Finish No. 2D or 2B, conforming to ASTM A 167, Federal Specification QQ-S-766C. Solder joints with stainless steel type flux 50/50 solder, neutralize flux after soldering.
- 2.1.8 Plumbing Vent Flashing: Shall be 4 pound soft lead sheet, ASTM B 29, one piece preformed for 1-1/2 inch to 4 inch pipe with 12 inch height.
- 2.1.9 Solder for Stainless Steel: Solder joints with stainless steel type flux, 50/50 solder, neutralize flux after soldering.
- 2.1.10 Parapet Stone Cap Scupper Drain and Splash Pan: Shall be stainless steel, minimum 26 gage, Type 302/304 Mill Rolled Finish No.2D or 2B, Conforming to ASTM A 167, Federal Specification QQ-S-766C. Solder joints with stainless steel type flux, 50/50 solder, neutralize flux after soldering (lead free).
- 2.1.11 Solder for Stainless Steel: Solder joints with stainless steel type flux, 50/50 solder, neutralize flux after soldering (no lead).
- 2.1.12 Out-of-Service Former Roof Hatch and Roof Curb Closures: Shall be 1-1/2 inches x 22 gage galvanized steel "B" deck conforming to ASTM 446.
- 2.1.13 Stainless Steel Splash Pan, New Access Door Sill and Former Chimney Cap: Shall be fabricated from stainless steel, minimum 26 gage, Type 302/304 Mill Rolled Finish No.2D or 2B, Conforming to ASTM A 167, Federal Specification QQ-S-766C. Solder joints with stainless steel type flux, 50/50 solder, neutralize flux after soldering (lead free).

2.1.14 Pelican Hood Penetrations Flashing For Electric Conduit and HVAC Condenser Pipes: Shall be

2.2 ACCESSORY MATERIALS

- 2.2.1 All clamps, straps and supports to be stainless steel.
- 2.2.2 Nails: Shall be hot-dipped galvanized ring shank nails, size as required by construction.
- 2.2.3 Primer: Shall be asphaltic primer conforming to requirements of ASTM D-41.
- 2.2.4 Steel Roof Deck Fasteners: Shall be ITW Buldex Tek Self Drilling Screws, ¼ inch x 1-1/2 x 20.
- 2.2.5 Steel fasteners: Shall be equal to Olympic #14 Factory Mutual approved fastener, fluorocarbon coated with CR-10 coating, length as required by construction.
- 2.2.6 Caulking: Shall be as specified in Section 07920 - Sealants and Caulking.
- 2.2.7 Plastic Roofing Cement: Shall be asphalt-based, asbestos free roof cement conforming to requirements of ASTM D-2822, Type I.
- 2.2.8 Water Barrier Membrane for Parapet Scupper Drain: Shall be Lexsuco RF40 PVC membrane. Laps or splices adhesive shall be hot air welded.
- 2.2.9 One-Piece, Vibration Resistance Concrete Anchor: Shall be Powers SPIKE ¼ inch diameter manufactured from high grade carbon steel (ASTM B 633) with mushroom head at one end and a specially designed "S" shaped expansion mechanism on the working end. Pre-drill hole ½ inch depth greater than SPIKE length.
- 2.2.10 Masonry Expansion Fasteners: Shall be Powers Zamac Nailin drive anchor with Type 304 stainless steel nail ¼" x 2".

2.3 FABRICATION

- 2.3.1 Fabricate and install sheet metal sections in 10-foot lengths except where shorter lengths are required by construction.
- 2.3.2 Form sections square, true, and accurate to size, free from distortion, sharp edges, and other defects detrimental to appearance or performance.
- 2.3.3 Junctures, intersections, corners, and unions of sheet metal shall be held to 18-inch legs or less.
- 2.3.4 Do not place dissimilar metals in direct contact with each other nor in positions where water sheds across both metals.

2.3.5 Use nails, screws, bolts, or other fasteners of the same material or of material that is chemically compatible with the contacted metals.

2.3.6 Hellarc weld or solder all corners continuous to provide watertight joint.

PART 3 EXECUTION

3.1 INSPECTION

3.1.1 Inspect nailer areas to verify clean, smooth, free of depressions, waves, or projections and solidly supported joints.

3.2 REMOVAL

3.2.1 Carefully remove counterflashing and perimeter flashing and dispose of as previously described.

3.3 INSTALLATION

3.3.1 Dissimilar metals shall be kept separated to prevent galvanic action. Preventative measures shall include separation by suitable bituminous paint.

3.3.2 Where bituminous materials are to be applied to sheet metal, the flanges shall first be primed with an asphaltic primer. The primer shall be interrupted where caulking is to be applied.

3.3.3 Form and install new counterflashing metal as shown in detail drawings. Lap joints 3 inches.

3.3.4 New galvalume sheet metal counterflashing at masonry walls, parapets shall include 1/8 inch x 1 inch butyl tape sealant. Tape sealant shall be placed in the mating area between existing copper through-wall flashing and new sheet metal counterflashing.

3.3.5 Apply caulking between flat surface of counterflashing and masonry, etc. prior to securing.

3.3.6 All exposed edges of sheet metal shall be folded back, or hemmed, on concealed surfaces.

3.3.7 Install shop formed counterflashing in 10 foot lengths maximum with a minimum number of pieces of each straight run.

3.3.8 Engage formed drip edge with a continuous cleat.

3.3.9 Caulk top edge of counterflashing, domed to shed water.

3.3.10 Install pipe flashings, vent pipe flashings, etc. in accordance with detail drawings.

3.3.11 Miscellaneous Flanged Flashing Installation

- 3.3.11.1 Set flange in a solid bed of black plastic roof cement. If flange width exceeds 12 inches, secure it to wood blocking with suitable fasteners placed near each corner and at the center of each side.
 - 3.3.11.2 Except at plumbing vents or other locations where flashing is turned into the top of the pipe or otherwise integrally secure against water entry, install bonnet flashing extending below and beyond edges of flashing riser, and secure mechanically to roof penetration so that the connection is watertight. Securement by sealant alone is not acceptable.
 - 3.3.11.3 Strip flange with 2 plies of felt cemented in bitumen. Fit all plies snugly to the vertical flange. Extend the first ply a minimum of 6 inches beyond the edge of the flange and the second ply 6 inches beyond the previous one. Use the same type of felt and bitumen as in the roof membrane.
 - 3.3.11.4 At sanitary vents using lead flashing, turn the top of the sleeve into the top of the pipe a minimum of 1-1/2 inches. Prefabricated caps may be substituted.
- 3.3.12 Install pipe flashings, vent pipe flashings, etc. in accordance with detail drawings.
- 3.3.13 All metal flanges shall be installed on top of membrane and the primed flange set in bed of plastic cement.
- 3.3.14 Strip in primed metal flanges with an additional felt membrane per detail drawings.
- 3.3.15 Install metal to be water and weather tight with lines, arises, and angles sharp and true with plane surfaces free of waves or buckles.
- 3.3.16 Form and install new counterflashing metal as shown in detail drawing. Lap joints a minimum of 3 inches and lock joints.
- 3.3.17 Notch and lap counterflashing sections a minimum of three inches. Do not rivet or otherwise secure joints through fascia.
- 3.3.18 Fabricate stainless steel splash pans with all seams, joints soldered. All exposed edges shall have 3/4" hem.
- 3.3.19 Place new stainless steel splash pans on roof walkway protection pads under downspouts.
- 3.3.20 Fabricate 26 gage stainless steel secondary drainage scupper. Fabricate to include ± 2 inches spill-out.
- 3.3.21 See Plan Sheets for fabrication of Pelican Hood.

- 3.3.22 Fabricate Kynar finish galvalume closure for exposed base flashing, cant, etc.
- 3.3.23 Install Lexsuco 20 mil PVC water barrier membrane to close top of coping cap cover.
- 3.3.24 Install new SBC Industries stainless steel hot pipe flashing. All vertical and horizontal seams shall be soldered in place.
- 3.3.25 Fabricate Kynar finish 24 gage galvalume sheet metal conductor head as detailed on plan sheets.
- 3.3.26 Fabricate downspouts as detailed and specified with flat lock or "s" seams. Flair ends of tube to receive higher lengths of downspout. Seal downspout drops to gutter and attach to downspout with stainless sheet metal screws.
- 3.3.27 Downspout Straps for Kynar finish galvalume downspouts shall be fabricated in accordance with SMACNA Plate 35, Figure A or approved design. Form downspout straps from 1/8" x 1" galvanized flat bar, spaced at +/- 5 feet. Clad straps with Kynar finish galvalume sheet. Minimum three (3) straps per downspout.
- 3.3.28 Fabricate and install new Kynar finish 24 gage galvalume sheet metal gutters, gutter expansion joints and downspouts.
- 3.3.29 Clad gutter hangers 1/8: x 1" galvanized hanger bar with Kynar finish 25 gage or 26 gage galvalume sheets.
- 3.3.30 Fabricate and install parapet scupper drains with all joints, seams soldered or welded to provide watertight construction.
- 3.3.31 Fabricate and install out of service former chimney Kynar finish galvalume sheet metal cap with cross break top, secured with 22 gage galvanized steel locking cleat.

END OF SECTION

SECTION 07700

ROOF SPECIALTIES AND ACCESSORIES

PART I GENERAL

1.1 WORK INCLUDED

- 1.1.1 Walkway Protection Pads
- 1.1.2 Plumbing Vent Flashing
- 1.1.3 S.B.C. Industries Electrical Flashing Units
- 1.1.4 Pitch Pocket System at Roof Penetrations
- 1.1.5 Retrofit Roof Drains
- 1.1.6 Structural Steel Angles for Out-of-Service Roof Hatch
- 1.1.7 New Exterior Steel Access Door.

1.2 RELATED SECTIONS

- 1.2.1 Rough Carpentry - Section 06100
- 1.2.2 Rigid Board Insulation - Section 07212
- 1.2.3 Built-Up Asphalt Roofing - Section 07510
- 1.2.4 Sheetmetal Flashing and Trim - Section 07620

PART 2 PRODUCTS

2.1 MATERIALS

- 2.1.1 Plumbing Vent Flashing: Shall be 4 lb. soft lead sheet, ASTM B 29 one piece, preformed for 1-1/2 inch to 4 inch pipe with 12 inch height.
- 2.1.2 Electrical Conduit Flashing: Shall be S.B.C. Industries stainless steel flashing units for conduit flashing. Units shall be "D" series model, constructed of stainless steel, 26 gage, Type 304-2B finish.
- 2.1.3 Roof Walkway Protection: Shall be DynaTred Plus, 32 inches x 32 inches, preformed, skid resistant boards protective surfacing as manufactured by Johns Manville, or approved equal.
- 2.1.4 Pitch Pan System: Shall be Weather-Tite Lockin' Pockets Inter-Locking Pitch Pocket System manufactured by WTT Systems, LLC Chagrin Falls, OH 44023

(866) 868-0883. Sizes shall be 6 inches to enclose non standard penetrations or sizes.

- 2.1.5 Fill for Pitch Pan System: Shall be Weather-Tite Hurricane Force® Universal Sealer manufactured by WTT Systems, LLC.
- 2.1.6 Retro-Fit Roof Drains: Shall be U-Flow Aluminum Hercules No. HD-AL-4A, or HD-AL-5A manufactured by U-Flow Roof Drain Systems, Inc. Roof drain assembly shall include cast aluminum dome strainer, cast aluminum clamping ring, U-Flow Seal for complete retrofit installation. U-Flow overflow retro-fit drain shall include a spun aluminum drain attachment to provide a roof extension at $\pm 3 \frac{1}{2}$ inches. Roof drain size varies from 3 inches to 6 inches, contractor verify.
- 2.1.7 Structural Steel Out-of-Service Curb Support Angle for Deck Closure: Shall be steel angle 2 1/2 inches x 3 inches x 3/16 inch conforming to ASTM A-36. Shop prime/paint.
- 2.1.8 Self Drilling Carbon Steel Deck Screw: Shall be ITW Buildex Teks Fastener 12 -24 x 2 inches with #5 drill bit.
- 2.1.9 Fastener for Structural Steel Angle to former roof hatch curb: Shall be Powers Wedge Bolt 3/8" x 3".
- 2.1.10 New Steel Access Double Door: Shall be galvanized steel door 1 3/4 inches fabricated from 14 gage steel sheets with unitized steel grid core, size to match existing steel door frame. Finish for door shall be standard prime finish for field painting. Door shall be provided by Palmetto Metal Products (803-783-4527), or approved equal. New door assembly shall include hardware, lock, closer, threshold, etc.

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 Verify roof membrane is prepared to receive installation of walkway protection.
- 3.1.2 Prior to installation of Weather-Tite Lockin' Pocket, the surface to receive the Pitch Pocket System should be clean, dry, free of dirt, dust, debris, oils loose and/or embedded gravel, un-adhered coatings, deteriorated membrane and other containments that may result in a surface that is not sound or is uneven. Penetrations should be prepared by wire brushing to remove loose cements, sealers, rust or other containments that would prevent a positive seal.

3.2 INSTALLATION

- 3.2.1 Install S.B.C. Industries flashing units in accordance with manufacturer's instructions.
- 3.2.2 Sweep loose granules from roof area to receive walk pads. Place walk pads with trowel application of roof cement on each corner and center of walk pad. Install

walk pads at HVAC equipment requiring routine maintenance and as indicated on roof plan sheets.

- 3.2.3 Seal base of pitch pocket penetration with LPS to prevent the potential of sealer flowing through the openings.
- 3.2.4 Place pitch pocket Lockin' in desired location, mark outside edge of pocket for reference. Pitch pocket Lockin' Pocket should be placed to assure at least one (1) inch clearance from inside of Lockin' Pocket and penetration.
- 3.2.5 Apply a bead of LPS to the substrate and set Lockin' Pocket in place, apply equal pressure to assure positive contact with roof surface. Strike away all excess sealant.
- 3.2.6 Dispense Weather-Tite Hurricane Force® Universal Sealer into assembled Lockin' Pocket pitch pocket until full.
- 3.2.7 Install Retrofit aluminum roof drains into existing cast iron roof drains, securing mounting flange to new treated wood blocking.
- 3.2.8 Mechanically fasten new steel angle deck closure to existing curb support frame. Fasteners shall be spaced maximum 12 inches on center.
- 3.2.9 After retrofit drains are installed, perform water test to ensure watertight connection with existing room drain, drain pipe.
- 3.2.10 Form and pour new concrete curb at roof access door opening to roof Area A. Install curb as detailed on roof plan sheets.
- 3.2.11 Install new steel access door for roof Area A. Modify existing door frame to accommodate installation of new exterior door and hardware.
- 3.2.12 Install new weather stripping for door and reinstall existing door threshold.
- 3.2.13 Prime and paint door with two coats exterior paint, color to be selected.

END OF SECTION

SECTION 07920

SEALANTS AND CAULKING

PART 1 GENERAL

1.1 WORK INCLUDED

- 1.1.1 Caulk and seal all joints where shown on the drawings and elsewhere as required to provide a positive barrier against passage of air and passage of moisture.

1.2 RELATED WORK

- 1.2.1 Built Up Asphalt Roofing - Section 07510
- 1.2.2 Sheet Metal Flashing and Trim - Section 07620
- 1.2.3 Roof Specialties and Accessories - Section 07700

1.3 QUALITY ASSURANCE

- 1.3.1 Products used in the work shall be produced by manufacturers regularly engaged in the manufacture of similar items and with a history of successful production acceptable to the Consultant.

1.4 PRODUCT HANDLING

- 1.4.1 Deliver materials to the job site in original, unopened containers. Materials are to be stored in a protected area between 40-80 degrees F.
- 1.4.2 Do not retain on the job site any material which has exceeded the shelf life recommended by its manufacturer.
- 1.4.3 Protect all surfaces from staining or damage. All damaged work shall be repaired or replaced as directed by the Consultant and at no additional cost to the Owner.

1.5 JOB CONDITIONS

- 1.5.1 Do not apply caulking or sealants when the surface temperature is below 40 degrees F, or above 125 degrees F. Do not apply materials when surface is damp or during cold, rainy, or frosty weather.
- 1.5.2 Store all products in accordance with manufacturer's recommendations.

PART 2 PRODUCTS

2.1 SEALANTS

- 2.1.1 General: except as directed by the Consultant, use only the type of sealants described in this section.
- 2.1.2 Sealant shall be Dow Silicone Sealant 790 as manufactured by Dow Corning, Sikaflex 1a, by Sika, Inc., Dura-Link as manufactured by ChemLink, Sonolastic NP-1 as manufactured by Sonneborn or approval equal. Color shall be selected by Owner.
- 2.1.3 Sealant for hot stack penetration shall be 3M Super Silicone Sealant as manufactured by Adhesives, Coating and Sealer Division/3M. Color shall be clear.

2.2 BACK-UP MATERIALS

- 2.2.1 General: Use only those back-up materials which are specifically recommended for this installation by the manufacturer of the sealant used, and which are non-absorbent and non-staining. Back-up materials must be 1-1/2 times the width of the joint.
- 2.2.2 Acceptable types include closed-cell, resilient urethane or polyvinylchloride foam; closed-cell, polyethylene foam; closed-cell sponge of vinyl or rubber, or approved equal.

2.3 CLEANER

- 2.3.1 For Dow 790 cleaner shall be Xylol, Toluol, Methyl ethyl ketone or commercial solvent recommended by the sealant manufacturer.
- 2.3.2 For Super Silicone, surface shall be wiped with non-oily solvent such as 3M Scotch-Grip No.3 or No.4.

2.4 PRIMER

- 2.4.1 Shall be as recommended by sealant manufacturer.

2.5 OTHER MATERIALS

- 2.5.1 All other materials not specifically described but required for complete and proper caulking and installation of sealants shall be first quality of their respective kinds, new, and as selected by the Contractor subject to the approval of the Owner.

PART 3 EXECUTION

3.1 GENERAL

- 3.1.1 Examine the areas and conditions under which work will be performed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

3.2.1 Metal Surfaces

- 3.2.1.1 Metal surface in contact with sealant shall be cleaned of temporary protective coatings, dirt oil, and grease.
- 3.2.1.2 When masking tape is used for a protective cover, remove the tape just after to applying the sealant.
- 3.2.1.3 Use only such solvents to remove protective coatings as are recommended for that purpose by the manufacturing of the equipment or metal work and which are non-staining.

3.3 INSTALLATION OF BACK-UP MATERIAL

- 3.3.1 Use only the back-up material recommended by the manufacturer of the sealant and approved by the owner for the particular installation, compressing the back-up material 25% to 50% to secure a positive and secure fit. When using back-up of tube or rod stock, avoid lengthwise stretching of the material. Do not twist or braid hose, or rod back-up stock.

3.4 JOINT DESIGN

- 3.4.1 Joint depth shall never be greater than width.

Joint width is 1/4 inch to 1/2 inch wide sealant depth at midpoint is to be 1/4 inch.

Joint width is 1/2 inch to 1 inch wide sealant depth at midpoint is to be 3/8 inch to 1/2 inch.

Joint width is 1 inch to 2 inches wide sealant depth at midpoint is to be 1/2 inch.

- 3.4.2 In deep joints, the sealant depth shall be controlled by the use of back-up materials to maintain the recommended depth.
- 3.4.3 Where depth of joint does not permit the use of back-up material then a bond breaker strip must be installed to prevent three point bonding.

3.5 INSTALLATION OF SEALANTS

- 3.5.1 General: Prior to the start of installation of each joint, verify the joint type according to the details in the drawings and verify that the required proportion of width of joint to depth of joint has been secured.
- 3.5.2 Equipment: Apply sealant under pressure with hand or power-actuated gun or other appropriate means. Guns shall have nozzle of proper size and shall provide sufficient pressure to completely fill joints as designed.

- 3.5.3 Masking: Thoroughly and completely mask all joints where the appearance of sealant on adjacent surface would be objectionable.
- 3.5.4 Installation of sealant: Install the sealant in strict accordance with the manufacturer's recommendations as approved by the Owner, thoroughly filling all joints to the recommended depth.
- 3.5.5 Tooling: Tool all joints to a slightly concave profile that will shed water. Tooling to be done immediately after sealant application.

3.6 CLEAN UP

- 3.6.1 Remove masking tape immediately after joints have been tooled.
- 3.6.2 Keep adjacent surfaces clean and free from sealant as the installation progresses. Use solvent or cleaning agent as recommended by the sealant manufacturer.

END OF SECTION