Project Manual Bldg. 502 Demolition H59-N834-JM



Greenville Technical College

PO Box 5616

Greenville, SC 29606



508 Rhett St. Ste. 101

Greenville, SC 29601



72 Pointe Cir.

Greenville, SC 29615

November 7, 2018

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SE-310

INVITATION FOR DESIGN-BID-BUILD CONSTRUCTION SERVICES

| AGENCY/OWNER: Greenville Technical College | |
|---|---|
| PROJECT NAME: Greenville - Bldg. 502 Demolition | |
| PROJECT NUMBER: H59-N834-JM | |
| PROJECT LOCATION: 226 S. Pleasantburg Dr. Greenville, SC 2960 | 07 |
| DESCRIPTION OF PROJECT/SERVICES: Asbestos abatement, de Valid SC GC license Group 2 or higher and DHEC licensed abatement owned businesses are encouraged to submit a bid. | emolish building, remove slab, grade and stone area, |
| BID/SUBMITTAL DUE DATE: 11/30/2018 CONSTRUCTION CO | OST RANGE: \$ 150,000 to \$ 200,000 N/A |
| PROJECT DELIVERY METHOD: Design-Bid-Build | |
| BID SECURITY IS REQUIRED IN AN AMOUNT NOT LESS THA | N 5% OF THE BASE BID. |
| | YMENT BOND REQUIRED? Yes ⊠ No □ |
| BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM: w | |
| | OSIT REFUNDABLE Yes 🔲 No 🗀 N/A 🖂 |
| Bidders must obtain Bidding Documents/Plans from the above listed source(s) to be listed any other source do so at their own risk. All written communications with official plan hole | as an official plan holder. Bidders that rely on copies obtained from ders & bidders will be via email or website posting. |
| All questions & correspondence concerning this Invitation shall be addressed to the A/E. | |
| A/E NAME: Seamon Whiteside (civil) / Terracon Consultants (Asbestos | s Abatement) |
| A/E CONTACT: Joe Bryant (SWA) / George Flores (Terracon) | |
| A/E ADDRESS: Street/PO Box: SWA 508 Rhett St. Ste 101 / Terraco | on - 72 Pointe Cir |
| City:_Greenville | State: SC ZIP: 29601-29615 |
| EMAIL: <u>JBryant@seamonwhiteside.com/george.flores2@terracon.com</u> | |
| AGENCY PROJECT COORDINATOR: Bill Tripp | |
| ADDRESS: Street/PO Box: PO Box 5616 | |
| City: Greenville | State: SC ZIP: 29606- |
| EMAIL: bill.tripp@gvltec.edu | TELEPHONE: (864) 250-8112 |
| 2. Marin programme and a second | TEBELLIONE. (804) 230-8112 |
| | ANDATORY ATTENDANCE: Yes 🗌 No 🛛 |
| | S. Pleasantburg Dr Greenville, SC 29607 |
| BID DUE DATE: See Above TIME: 10:30 AM PLACE: 23 W | /interberry Ct. Bldg. 107 Greenville, SC 29607 |
| BID DELIVERY ADDRESSES: | |
| HAND-DELIVERY: MA | IL SERVICE: |
| | n: Bill Tripp |
| | Box 5616 |
| Greenville, SC 29607 Gree | enville, SC 29606 |
| IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION? | Agency MUST check one) Yes 🗌 No 🗵 |
| APPROVED BY: A Project Manager) | DATE: <u>11/08/18</u> |

South Carolina Division of Procurement Services, Office of the State Engineer Version of MAIA Document A701™ – 1997

Instructions to Bidders

This version of AIA Document A701[™]–1997 is modified by the South Carolina Division of Procurement Services, Office of the State Engineer ("SCOSE"). Publication of this version of AIA Document A701–1997 does not imply the American Institute of Architects' endorsement of any modification by SCOSE. A comparative version of AIA Document A701–1997 showing additions and deletions by SCOSE is available for review on the SCOSE Web site.

Cite this document as "AIA Document A701™— 1997, Instructions to Bidders — SCOSE Version," or "AIA Document A701™—1997 — SCOSE Version."

South Carolina Division of Procurement Services, Office of the State Engineer Version of MAIA Document A701™ – 1997

Instructions to Bidders

for the following PROJECT:

(Name and location or address)

Greenville - Bldg. 502 Demolition H59-N834-JM

226 S. Pleasantburg Dr. Greenville, SC 29607

THE OWNER:

(Name, legal status and address) Greenville Technical College PO Box 5616

Greenville, SC 29606

The Owner is a Governmental Body of the State of South Carolina as defined by Title 11, Chapter 35 of the South Carolina Code of Laws, as amended.

THE ARCHITECT:

(Name, legal status and address)
Seamon-Whiteside / Terracon Consultants
508 Rhett St. Ste. 101 / 72 Pointe Circle
Greenville, SC 29601 / 29615

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

ARTICLE 1 DEFINITIONS

- § 1.1 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, Supplementary Instructions to Bidders, the Bid Form, the Notice of Intent to Award, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract, and other documents set forth in the Bidding Documents. Any reference in this document to the Agreement between the Owner and Contractor, AIA Document A101, or some abbreviated reference thereof, shall mean AIA Document A101TM—2007 Standard Form of Agreement Between Owner and Contractor, SCOSE edition. Any reference in this document to the General Conditions of the Contract for Construction, AIA Document A201, or some abbreviated reference thereof, shall mean AIA Document A201TM—2007 General Conditions of the Contract for Construction, SCOSE edition.
- § 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, or in other Contract Documents are applicable to the Bidding Documents.
- § 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.
- § 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- § 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.
- § 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- § 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- § 1.8 A Bidder is a person or entity who submits a Bid.
- § 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

- § 2.1 The Bidder by submitting a Bid represents that:
- § 2.1.1 The Bidder has read and understands the Bidding Documents and Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction. 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.
- § 2.1.2 The Bid is made in compliance with the Bidding Documents.
- § 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents and accepts full responsibility for any pre-bid existing conditions that would affect the Bid that could have been ascertained by a site visit. 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.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

§ 2.1.5 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.

§ 2.1.5.1 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:
 - .1 those prices;
 - .2 the intention to submit a bid; or
 - .3 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.

§ 2.1.5.2 Each signature on the bid is considered to be a certification by the signatory that the signatory:

- 11 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 Section 2.1.5.1 of this certification; or
- .2 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 Section 2.1.5.1 of this certification [As used in this subdivision, the term "principals" means the person(s) in the bidder's organization responsible for determining the prices offered in this bid];
- As an authorized agent, does certify that the principals referenced in Section 2.1.5.2.2 of this certification have not participated, and will not participate, in any action contrary to Section 2.1.5.1 of this certification; and
- .4 As an agent, has not personally participated, and will not participate, in any action contrary to Section 2.1.5.1 of this certification.
- § 2.1.5.3 If the bidder deletes or modifies Section 2.1.5.1.2 of this certification, the bidder must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

§ 2.1.6 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.

§ 2.1.7 CERTIFICATION REGARDING DEBARMENT AND OTHER RESPONSIBILITY MATTERS

§ 2.1.7.1 By submitting a Bid, Bidder certifies, to the best of its knowledge and belief, that:

- 1 Bidder and/or any of its Principals-
 - Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
 - 2 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
 - Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in Section 2.1.7.1.1.2 of this provision.
- .2 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.

- 3 "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).
- § 2.1.7.2 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.
- § 2.1.7.3 If Bidder is unable to certify the representations stated in Section 2.1.7.1, 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 nonresponsible.
- § 2.1.7.4 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 Section 2.1.7.1 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.
- § 2.1.7.5 The certification in Section 2.1.7.1 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.

§ 2.1.8 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 the 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, the 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.

§ 2.1.9 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.

- § 2.1.9.1 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.
- § 2.1.9.2 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.
- § 2.1.9.3 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.

§ 2.1.10 OPEN TRADE REPRESENTATION (JUN 2015)

By submitting an Offer, the Offeror represents that Offeror is not currently engaged in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code Section 11-35-5300. [02-2A083-1]

ARTICLE 3 BIDDING DOCUMENTS § 3.1 COPIES

- § 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated 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.
- § 3.1.2 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- § 3.1.3 The Owner has made copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.
- § 3.1.4 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.

§ 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

- § 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.
- § 3.2.2 Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least ten (10) days prior to the date for receipt of Bids.
- § 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by written Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them. 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.

§ 3.3 SUBSTITUTIONS

- § 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. 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.
- § 3.3.2 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 Architect at least ten (10) days prior to the date for receipt of Bids established in the Invitation for

Bids. 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 Work, 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 Architect's decision of approval or disapproval of a proposed substitution shall be final.

- § 3.3.3 If the Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
- § 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 ADDENDA

- § 3.4.1 Addenda will be transmitted to all who are known by the issuing office to have received a complete set of Bidding Documents.
- § 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
- § 3.4.3 Addenda will be issued no later than 120 hours prior to the 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.
- § 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.
- § 3.4.5 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, the 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 Bid Date.
- § 3.4.6 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 solicitation, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation 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.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 PREPARATION OF BIDS

- § 4.1.1 Bids shall be submitted on the SE-330 Bid Form included with the Bidding Documents.
- § 4.1.2 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.
- § 4.1.3 Sums shall be expressed in figures.
- § 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid. Bidder shall not make stipulations or qualify his 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.
- § 4.1.5 All requested Alternates shall be bid. The failure of the bidder to indicate a price for an Alternate shall render the Bid non-responsive. Indicate the change to the Base Bid by entering the dollar amount and marking, as appropriate, the box for "ADD TO" or "DEDUCT FROM". If no change in the Base Bid is required, enter "ZERO" or "No Change."

1

For add alternates to the base bid, Subcontractor(s) listed on page BF-2 of the Bid Form to perform Alternate Work shall be used for both Alternates and Base Bid Work if Alternates are accepted.

- § 4.1.6 Pursuant to Title 11, Chapter 35, Section 3020(b)(i) of the South Carolina Code of Laws, as amended, Section 7 of the Bid Form sets forth a list of subcontractor specialties for which Bidder is required to identify only those subcontractors Bidder will use to perform the work of each listed specialty. Bidder must follow the Instructions in the Bid Form for filling out this section of the Bid Form. Failure to properly fill out Section 7 may result in rejection of Bidder's bid as non-responsive.
- § 4.1.7 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.

§ 4.2 BID SECURITY

- § 4.2.1 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.
- § 4.2.2 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.
- § 4.2.3 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 4.2.
- § 4.2.4 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.

§ 4.3 SUBMISSION OF BIDS

- § 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall, unless hand delivered by the Bidder, be addressed to the Owner's designated purchasing office as shown in the Invitation for Bids. The envelope shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail or special delivery service (UPS, Federal Express, etc.), the envelope should be labeled "BID ENCLOSED" on the face thereof. Bidders hand delivering their Bids shall deliver Bids to the place of the Bid Opening as shown in the Invitation for Bids. 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 Invitation for Bids prior to the time of the Bid Opening.
- § 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.
- § 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

- § 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.
- § 4.3.5 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.

§ 4.4 MODIFICATION OR WITHDRAWAL OF BID

- § 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.
- § 4.4.2 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.
- § 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
- § 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE 5 CONSIDERATION OF BIDS

- § 5.1 OPENING OF BIDS
- § 5.1.1 Bids received on time will be publicly opened and will be read aloud. The Owner will not read aloud Bids that the Owner determines, at the time of opening, to be non-responsive.
- § 5.1.2 At bid opening, the Owner will announce the date and location of the posting of the Notice of Intended Award.
- § 5.1.3 The Owner will send a copy of the final Bid Tabulation to all Bidders within ten (10) working days of the Bid Opening.
- § 5.1.4 If the Owner determines to award the Project, the Owner will, after posting a Notice of Intended Award, send a copy of the Notice to all Bidders.
- § 5.1.5 If only one Bid is received, the Owner will open and consider the Bid.

§ 5.2 REJECTION OF BIDS

- § 5.2.1 The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.
- § 5.2.2 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 Failure to Bid an Alternate, except as expressly allowed by law;
 - .6 Failure to list qualified Subcontractors as required by law;
 - .7 Showing any material modification(s) or exception(s) qualifying the Bid;
 - .8 Faxing a Bid directly to the Owner or their representative; or
 - .9 Failure to include a properly executed Power-of-Attorney with the bid bond.
- § 5.2.3 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

1

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.

§ 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION § 6.1 CONTRACTOR'S RESPONSIBILITY

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.

§ 6.2 CLARIFICATION

Pursuant to Section 11-35-1520(8), the Procurement Officer may elect to communicate with a Bidder after 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 E (Paragraph A(6)) to the Manual for Planning and Execution of State Permanent Improvement, 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. [Section 11-35-1520(8); R.19-445,2080].

§ 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the manufacturers, products, and the suppliers of principal items or systems of materials and equipment proposed for the Work; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND § 7.1 BOND REQUIREMENTS

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds may be secured through the Bidder's usual sources.

§ 7.1.2 The performance and payment bonds shall conform to the requirements of Section 11.4 of the General Conditions of the Contract. If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid.

§ 7.2 TIME OF DELIVERY CONTRACT, CERTIFICATES OF INSURANCE AND FORM OF BONDS

§ 7.2.1 After expiration of the protest period, the Owner will tender a signed Contract for Construction to the Bidder and the Bidder shall return the fully executed Contract for Construction to the Owner within seven (7) days thereafter. The Bidder shall deliver the required bonds and certificate of insurance to the Owner not later than three (3) days following the date of execution of the Contract. Failure to deliver these documents as required shall entitle the Owner to consider the Bidder's failure as a refusal to enter into a contract in accordance with the terms and conditions of the Bidder's Bid and to make claim on the Bid Security for re-procurement cost.

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

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

ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101-2007, Standard Form of Agreement Between Owner and Contractor, SCOSE edition.

ARTICLE 9 MISCELLANEOUS

\S 9.1 NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING IMPORTANT TAX NOTICE - NONRESIDENTS ONLY

- § 9.1.1 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.
- § 9.1.2 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
- § 9.1.3 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, S.C. 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 (Available through SC Department of Revenue).

§ 9.2 CONTRACTOR LICENSING

Contractors and Subcontractors listed in Section 7 of the Bid Form who are required by the South Carolina Code of Laws to be licensed, must be licensed at the time of bidding.

§ 9.3 SUBMITTING CONFIDENTIAL INFORMATION

- § 9.3.1 For every document the Bidder submits in response to or with regard to this solicitation or request, the Bidder must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that the 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.
- § 9.3.2 For every document the Bidder submits in response to or with regard to this solicitation or request, the Bidder must separately mark with the words "TRADE SECRET" every page, or portion thereof, that the Bidder contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act.
- § 9.3.3 For every document the Bidder submits in response to or with regard to this solicitation or request, the Bidder must separately mark with the word "PROTECTED" every page, or portion thereof, that the Bidder contends is protected by Section 11-35-1810.
- § 9.3.4 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.
- § 9.3.5 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 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.

§ 9.3.6 In determining whether to release documents, the State will detrimentally rely on the Bidders' marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED".

§ 9.3.7 By submitting a response, the 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".

§ 9.4 POSTING OF INTENT TO AWARD

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

Room or Area of Posting: Lobby - Room 101 **Building Where Posted:** Facilities Management

Address of Building: 23 Winterberry Ct. Greenville, SC 29607

WEB site address (if applicable): N/A

Posting date will be announced at 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

§ 9.5 PROTEST OF SOLICITATION OR AWARD

§ 9.5.1 Any prospective bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the solicitation of a contract shall protest within fifteen (15) 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 (10) 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.

§ 9.5.2 Any protest must be addressed to the CPO, Office of State Engineer, and submitted in writing:

- .1 by email to protest-ose@mmo.sc.gov,
- .2 by facsimile at 803-737-0639, or
- .3 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.

§ 9.6 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.

§ 9.7 BUILDER'S RISK INSURANCE

Bidders are directed to Article 11.3 of the South Carolina Modified AIA Document A201, 2007 Edition, which, unless provided otherwise in the bid documents, requires the contractor to provide builder's risk insurance on the project.

§ 9.8 TAX CREDIT FOR SUBCONTRACTING WITH MINORITY FIRMS

§ 9.8.1 Pursuant to Section 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.

§ 9.8.2 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.

§ 9.8.3 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.

§ 9.9 OTHER SPECIAL CONDITIONS OF THE WORK

None



Bid Bond

CONTRACTOR:

(Name, legal status and address) (Name

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)
Greenville Technical College
PO Box 5616 Greenville, SC 29606

BOND AMOUNT:

PROJECT:

(Name, location or address, and Project number, if any)

226 S Pleasantburg Dr Greenville SC 29607

Signed and sealed this

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

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Project Number, if any: H59-N834-JM

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

| | | /C 1) |
|-----------|-------------|--------|
| | (Principal) | (Seal) |
| (Witness) | | |
| | (Title) | |
| | (Surety) | (Seal) |
| (Witness) | | |
| | (Title) | |

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The form of the contract shall be the SCOSE Version of the AIA Document A101-2007, Standard Form of Agreement between Owner and Contractor where the basis of payment is a stipulated sum, which is incorporated herein by reference.

South Carolina Division of Procurement Services, Office of the State Engineer Version of ■ AIA Document A101™ – 2007

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

A sample of this document may be viewed in Appendix J.2 – SCOSE Versions of AIA Documents – Samples at http://procurement.sc.gov/manual

SE-330

LUMP SUM BID FORM

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

| _ | | | | | | |
|-------|---|--|---|---------------------------------------|---|--|
| BID | SUBMITTED BY: | | | | | |
| | | | (Bi | dder's Name) | | |
| BID | SUBMITTED TO: | | | | | |
| | | | (O) | vner's Name) | | |
| FOF | R: PROJECT NA | ME: Greenvil | le - Bldg. 502 | Demolition | | |
| | PROJECT NU | J MBER: <u>H59</u> - | N834-JM | | | |
| OFF | ER | | | | | |
| § 1. | In response to the Invit named Project, the under on the terms included Documents, for the pri- | ersigned Bidder pro in the Bidding Do ces and within the | oposes and agrees, ocuments, and to | if this Bid is acce | pted, to enter into a k as specified or | to Bidders for the above- Contract with the Owner indicated in the Bidding with the other terms and |
| § 2. | conditions of the Biddin Pursuant to SC Code § the Bidding Documents | 11-35-3030(1), Bi | dder has submitte | d Bid Security as | follows in the amo | unt and form required by |
| | ☐ Bid Bond with | Power of Attorney | y 🔲 1 | Electronic Bid Bo | ond \square | Cashier's Check |
| | | | (Bidder che | ck 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: (Bidder, check all that apply. Note, there may be more boxes than actual addenda. Do not check boxes that do not apply) | | | | | |
| | ADDENDA: | #1 | #2 | □ #3 | #4 | |
| § 4. | disposition of Bid Seco | urity. Bidder agreening of bids, and | ees that this Bid, shall remain oper | including all Bid for acceptance f | Alternates, if any or a period of <u>60</u> | on, those dealing with the r, may not be revoked or Days following the Bid Dwner. |
| § 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 (a. | s indicated in the B | idding Documents | and generally desc | ribed as follows): _ | Abate asbestos, demolish |
| | building, remove slab, | grade and stone are | ea. | | | |
| | \$ (Bidder to insert Base I | Bid Amount on line | above) | , which sum | is hereafter called | the Base Bid. |

SE-330 LUMP SUM BID FORM

§ 7. LISTING OF PROPOSED SUBCONTRACTORS PURSUANT TO SECTION 3020(b)(i), CHAPTER 35, TITLE 11 OF THE SOUTH CAROLINA CODE OF LAWS, AS AMENDED (See Instructions on the following page BF-2A)

Bidder shall use the below-listed Subcontractors in the performance of the Subcontractor Specialty Classification work listed:

| | W Histor Bubcontractors in th | le performance of the Subcontractor Special | |
|--|---|---|---|
| (A) SUBCONTRACTOR SPECIALTY (Completed by Owner) | (B) CLASSIFICATION or SUBCLASSIFICATION ABBREVIATION (Completed by Owner) | (C) SUBCONTRACTOR'S or PRIME CONTRACTOR'S NAME (Required - must be completed by Bidder) | (D) SUBCONTRACTOR'S or PRIME CONTRACTOR'S SC LICENSE NUMBER (Requested, but not Required) |
| | | BASE BID | |
| N/A | N/A | | |
| | | | |
| | | | |
| | | | ,4 |
| | 1 | ALTERNATE #1 | |
| | | | |
| | | | |
| | | | |
| | | 1-1 | |
| | | ALTERNATE #2 | |
| | - | | |
| | | | |
| | | | |
| | | | |
| | | ALTERNATE #3 | |
| | | | T |
| | | | |
| | | | |
| | | | |
| | | | |

If a Bid Alternate is accepted, Subcontractors listed for the Bid Alternate shall be used for the work of both the Alternate and the Base Bid work.

SE-330 LUMP SUM 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 Construction Services, 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 § 11-35-3020(b)(i).

§ 9. T

| TI | ME 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 60 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 amount | | | |
| | of \$_200.00 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 amount is intended by the parties as the predetermined measure of compensation for actual damages, | | | | |
| | penalty for nonperformance. | | | |
| AG | REEMENTS | | | |
| a) | Bidder agrees that this bid is subject to the requirements of the laws of the State of South Carolina. | | | |
| | | | | |

§ 10. A

- a)
- 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 BF 3

SE-330 LUMP SUM BID FORM

| CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATION |
|---|
| SC Contractor's License Number(s): |
| Classification(s) & Limits: |
| Subclassification(s) & Limits: |
| By signing this Bid, the person signing reaffirms all representation and certification made by both he person signing and the Bidder, including without limitation, those appearing in Article 2 of the SCOSE Version of the AIA A701, Instructions to Bidders, is expressly incorporated by reference. |
| BIDDER'S LEGAL NAME: |
| ADDRESS: |
| |
| TELEPHONE: |
| EMAIL: |
| |
| |
| SIGNATURE: DATE: |
| PRINT NAME: |
| TITLE: |

BF 4 SE-330

South Carolina Division of Procurement Services, Office of the State Engineer Version of MAIA Document A201™ – 2007

General Conditions of the Contract for Construction

This version of AIA Document A201™–2007 is modified by the South Carolina Division of Procurement Services, Office of the State Engineer ("SCOSE"). Publication of this version of AIA Document A201–2007 does not imply the American Institute of Architects' endorsement of any modification by SCOSE. A comparative version of AIA Document A201–2007 showing additions and deletions by SCOSE is available for review on the SCOSE Web site.

Cite this document as "AIA Document A201™–2007, General Conditions of the Contract for Construction—SCOSE Version," or "AIA Document A201™–2007 — SCOSE Version."

South Carolina Division of Procurement Services, Office of the State Engineer Version of AIA Document A201 $^{\text{TM}}$ – 2007

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Greenville - Bldg. 502 Demolition H59-N834-JM

226 S. Pleasantburg Dr. Greenville, SC 29607

THE OWNER:

(Name, legal status and address)
Greenville Technical College
PO Box 5616

Greenville, SC 29606

The Owner is a Governmental Body of the State of South Carolina as defined by Title 11, Chapter 35 of the South Carolina Code of Laws, as amended.

THE ARCHITECT:

(Name, legal status and address)
Seamon Whiteside & Terracon Consultants
508 Rhett St, Suite 101 / 72 Pointe Circle
Greenville, SC 29601 / 29615

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

This version of AIA Document A201-2007 is modified by the South Carolina Division of Procurement, Office of the State Engineer. Publication of this version of AIA Document A201 does not imply the American Institute of Architects' endorsement of any modification by South Carolina Division of Procurement, Office of the State Engineer. A comparative version of AIA Document A201-2007 showing additions and deletions by the South Carolina Division of Procurement, Office of the State Engineer is available for review on the State of South Carolina Web site.

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

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(Topics and numbers in bold are section headings.)

Acceptance of Nonconforming Work

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

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

Any reference in this document to the Agreement between the Owner and Contractor, AIA Document A101, or some abbreviated reference thereof, shall mean AIA Document A101TM—2007 Standard Form of Agreement Between Owner and Contractor, SCOSE edition. Any reference in this document to the General Conditions of the Contract for Construction, AIA Document A201, or some abbreviated reference thereof, shall mean AIA Document A201TM—2007 General Conditions of the Contract for Construction, SCOSE edition.

§ 1.1.2 THE CONTRACT

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

§ 1.1.3 THE WORK

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

§ 1.1.4 THE PROJECT

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

§ 1.1.5 THE DRAWINGS

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

§ 1.1.6 THE SPECIFICATIONS

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

§ 1.1.7 INSTRUMENTS OF SERVICE

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

§ 1.1.8 NOTICE TO PROCEED

The Notice to Proceed is a document issued by the Owner to the Contractor, with a copy to the Architect, directing the Contractor to begin prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed shall fix the date on which the Contract Time will commence.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. In the event of patent ambiguities within or between parts of the Contract Documents, 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 Architect's interpretation.

- § 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.
- § 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 CAPITALIZATION

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

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

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

- § 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service 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 Architect's or Architect's consultants' reserved rights.
- § 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

- § 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization, except as provided in Section 7.1.2. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's Representative. [Reference § 8.3 of the Agreement.]
- § 2.1.2 The Owner shall furnish to the Contractor within fifteen (15) days after receipt of a written request, information necessary and relevant for the Contractor to post Notice of Project Commencement pursuant to Title 29, Chapter 5, Section 23 of the South Carolina Code of Laws, as amended.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- § 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.
- § 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.
- § 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. Subject to the Contractor's obligations, including those in Section 3.2, the Contractor shall be entitled to rely on the accuracy of information furnished by the Owner pursuant to this Section but shall exercise proper precautions relating to the safe performance of the Work.
- § 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services; however, the Owner does not warrant the accuracy of any such 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 subsurface characteristics or other conditions of the area where the Work is to be performed beyond that which is provide in the Contract Documents.
- § 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one electronic copy (.pdf format) of the Contract Documents. The Contractor may make reproductions of the Contract Documents pursuant to Section 1.5.2.
- § 2.2.6 The Owner assumes no responsibility for any conclusions or interpretation made by the Contractor based on information made available by the Owner.
- § 2.2.7 The Owner shall obtain, at its own cost, general building and specialty inspection services as required by the Contract Documents. The Contractor shall be responsible for payment of any charges imposed for reinspections.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of 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 3 CONTRACTOR

§ 3.1 GENERAL

- § 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.
- § 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.
- § 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

- § 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. The Contractor acknowledges that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Owner, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from 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 Owner.
- § 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.
- § 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.
- § 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from latent errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed by the Owner in writing to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

- § 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.
- § 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

- § 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- § 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.
- § 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements 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. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. The Contractor shall comply with the requirements of Title 12, Chapter 8 of the South Carolina Code of Laws, as amended, regarding withholding tax for nonresidents, employees, contractors and subcontractors.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

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

negotiations concluded. Pursuant to Title 10, Chapter 1, Section 180 of the South Carolina Code of Laws, as amended, no local general or specialty building permits are required for state buildings.

- § 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.
- § 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.
- § 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.
- § 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 7.3.3.

§ 3.8 ALLOWANCES

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

- § 3.8.2 Unless otherwise provided in the Contract Documents,
 - Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
 - .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
 - Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual costs, as documented by invoices, and the allowances under Section 3.8.2.1.
- § 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT

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

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the name and qualifications of a proposed superintendent. The Owner may reply within 14 days to the Contractor in

writing stating whether the Owner has reasonable objection to the proposed superintendent. Failure of the Owner to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall notify the Owner, in writing, of any proposed change in the superintendent, including the reason therefore, prior to making such change. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

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

§ 3.10.3 Additional requirements, if any, for the constructions schedule are as follows: (Check box if applicable to this Contract))

✓ The construction schedule shall be in a detailed precedence-style critical path management (CPM) or primaveratype format satisfactory to the Owner and the Architect that shall also (1) provide a graphic representation of all activities and events that will occur during performance of the work; (2) identify each phase of construction and occupancy; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates"). Upon review and acceptance by the Owner and the Architect of the Milestone Dates, the construction schedule shall be deemed part of the Contract Documents and attached to the Agreement as Exhibit "A." If not accepted, the construction schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and the Architect and resubmitted for acceptance. The Contactor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. Whenever the approved construction schedule no longer reflects actual conditions and progress of the work or the Contract Time is modified in accordance with the terms of the Contract Documents, the Contractor shall update the accepted construction schedule to reflect such conditions. In the event any progress report indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time, any Milestone Date, or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.

§ 3.10.4 The Owner's review and acceptance of the Contractor's schedule is not conducted for the purpose of either determining its accuracy and completeness or approving the construction means, methods, techniques, sequences or procedures. The Owner's approval shall not relieve the Contractor of any obligations. Unless expressly addressed in a Modification, the Owner's approval of a schedule shall not change the Contract Time.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- § 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- § 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- § 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- § 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.
- § 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.
- § 3.12.5.1 The fire sprinkler shop drawings shall be prepared by a licensed fire sprinkler contractor and shall accurately reflect actual conditions affecting the required layout of the fire sprinkler system. The fire sprinkler contractor shall certify the accuracy of his shop drawings prior to submitting them for review and approval. The fire sprinkler shop drawings shall be reviewed and approved by the Architect's engineer of record who, upon approving the sprinkler shop drawings will submit them to the State Fire Marshal for review and approval. A copy of the shop drawings will also be sent to OSE for information. The Architect's engineer of record will submit a copy of the State Fire Marshal's approval letter to the Contractor, Architect, and OSE. Unless authorized in writing by OSE, neither the Contractor nor subcontractor at any tier shall submit the fire sprinkler shop drawings directly to the State Fire Marshal for approval.
- § 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- § 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.
- § 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.
- § 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

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§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, who shall comply with reasonable requirements of the Owner regarding qualifications and insurance and whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

- § 3.13.1 The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.
- § 3.13.2 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.
- § 3.13.3 The Contractor and any entity for which the Contractor is responsible shall not erect any sign on the Project site without the prior written consent of the Owner.

§ 3.14 CUTTING AND PATCHING

- § 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.
- § 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

- § 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.
- § 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

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

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

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

§ 3.18 INDEMNIFICATION

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

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

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Architect is that person or entity identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

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

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

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents. Any reference in the Contract Documents to the Architect taking action or rendering a decision with a "reasonable time" is understood to mean no more than fourteen days, unless otherwise specified in the Contract Documents or otherwise agreed to by the parties.

§ 4.2.2 The Architect will visit the site as necessary to fulfill its obligation to the Owner for inspection services, if any, and, at a minimum, to assure conformance with the Architect's design as shown in the Contract Documents and to observe the progress and quality of the various components of the Contractor's Work, and to determine if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or

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continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

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

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

- § 4.2.5 Based on the Architect's evaluations of the Work completed and correlated with the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.
- § 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.
- § 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- § 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.
- § 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

- § 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.
- § 4.2.11 The Architect will, in the first instance, interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. Upon receipt of such request, the Architect will promptly provide the non-requesting party with a copy of the request. The Architect's response to such requests will be made in writing with reasonable promptness.
- § 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, and will not show partiality to either. Except in the case of interpretations resulting in omissions, defects, or errors in the Instruments of Service or perpetuating omissions, defects, or errors in the Instruments of Service, the Architect will not be liable for results of interpretations or decisions rendered in good faith. If either party disputes the Architects interpretation or decision, that party may proceed as provided in Article 15. The Architect's interpretations and decisions may be, but need not be, accorded any deference in any review conducted pursuant to law or the Contract Documents.
- § 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.
- § 4.2.14 The Architect will review and respond to requests for information about the Contract Documents so as to avoid delay to the construction of the Project. The Architect's response to such requests will be made in writing with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information. Any response to a request for information must be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. Unless issued pursuant to a Modification, supplemental Drawings or Specifications will not involve an adjustment to the Contract Sum or Contract Time.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

- § 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
- § 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

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

- § 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, within fourteen days after posting of the Notice of Intent to Award the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (excluding Listed Subcontractors but including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Owner may reply within 14 days to the Contractor in writing stating whether the Owner has reasonable objection to any such proposed person or entity. Failure of the Owner to reply within the 14-day period shall constitute notice of no reasonable objection.
- § 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner has made reasonable and timely objection. The Owner shall not direct the Contractor to contract with any specific individual or entity for supplies or services unless such supplies and services are necessary for completion of the Work and the specified individual or entity is the only source of such supply or services.

- § 5.2.3 If the Owner has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.
- § 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner makes reasonable objection to such substitution. The Contractor's request for substitution must be made to the Owner in writing accompanied by supporting information.
- § 5.2.5 A Subcontractor identified in the Contractor's Bid in response the specialty subcontractor listing requirements of Section 7 of the Bid Form (SE-330) may only be substituted in accordance with and as permitted by the provisions of Title 11, Chapter 35, Section 3021 of the South Carolina Code of Laws, as amended. A proposed substitute for a Listed Subcontractor shall be subject to the Owner's approval as set forth is Section 5.2.3.

§ 5.3 SUBCONTRACTUAL RELATIONS

- § 5.3.1 By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise herein or in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.
- § 5.3.2 Without limitation on the generality of Section 5.3.1, each Subcontract agreement and each Sub-subcontract agreement shall include, and shall be deemed to include, the following Sections of these General Conditions: 3.2, 3.5, 3.18, 5.3, 5.4, 6.2.2, 7.3.3, 7.5, 7.6, 13.1, 13.12, 14.3, 14.4, and 15.1.6.
- § 5.3.3 Each Subcontract Agreement and each Sub-subcontract agreement shall exclude, and shall be deemed to exclude, Sections 13.2 and 13.6 and all of Article 15, except Section 15.1.6, of these General Conditions. In the place of these excluded sections of the General Conditions, each Subcontract Agreement and each Sub-subcontract may include Sections 13.2.1 and 13.6 and all of Article 15, except Section 15.1.6, of AIA Document A201-2007, Conditions of the Contract, as originally issued by the American Institute of Architects.
- § 5.3.4 The Contractor shall assure the Owner that all agreements between the Contractor and its Subcontractor incorporate the provisions of Subparagraph 5.3.1 as necessary to preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the work to be performed by Subcontractors so that the subcontracting thereof will not prejudice such rights. The Contractor's assurance shall be in the form of an affidavit or in such other form as the Owner may approve. Upon request, the Contractor shall provide the Owner or Architect with copies of any or all subcontracts or purchase orders.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

- § 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that
 - assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
 - .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.
- § 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.
- § 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.
- § 5.4.4 Each subcontract shall specifically provide that the Owner shall only be responsible to the subcontractor for those obligations of the Contractor that accrue subsequent to the Owner's exercise of any rights under this conditional assignment.
- § 5.4.5 Each subcontract shall specifically provide that the Subcontractor agrees to perform portions of the Work assigned to the Owner in accordance with the Contract Documents.
- § 5.4.6 Nothing in this Section 5.4 shall act to reduce or discharge the Contractor's payment bond surety's obligations to claims arising prior to the Owner's exercise of any rights under this conditional assignment.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS § 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

- § 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.
- § 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.
- § 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Reserved.

§ 6.2 MUTUAL RESPONSIBILITY

- § 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.
- § 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable

for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

- § 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.
- § 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.
- § 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

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

ARTICLE 7 CHANGES IN THE WORK § 7.1 GENERAL

- § 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.
- § 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone. If the amount of a Modification exceeds the limits of the Owner's Construction Change Order Certification (reference Section 9.1.7.2 of the Agreement), then the Owner's agreement is not effective, and Work may not proceed, until approved in writing by the Office of State Engineer.
- § 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

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- § 7.2.1 A Change Order is a written instrument prepared by the Architect (using Form SE-380 "Construction Change Order") and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:
 - .1 The change in the Work;
 - .2 The amount of the adjustment, if any, in the Contract Sum; and
 - .3 The extent of the adjustment, if any, in the Contract Time.
- § 7.2.2 If a Change Order provides for an adjustment to the Contract Sum, the adjustment must be calculated in accordance with Section 7.3.3.
- § 7.2.3 At the Owner's request, the Contractor shall prepare a proposal to perform the work of a proposed Change Order setting forth the amount of the proposed adjustment, if any, in the Contract Sum; and the extent of the proposed adjustment, if any, in the Contract Time. Any proposed adjustment in the Contract sum shall be prepared in accordance with Section 7.2.2. The Owner's request shall include any revisions to the Drawings or Specifications necessary to define any changes in the Work. Within fifteen days of receiving the request, the Contractor shall submit the proposal to the Owner and Architect along with all documentation required by Section 7.6.
- § 7.2.4 If the Contractor requests a Change Order, the request shall set forth the proposed change in the Work and shall be prepared in accordance with Section 7.2.3. If the Contractor requests a change to the Work that involves a revision to either the Drawings or Specifications, the Contractor shall reimburse the Owner for any expenditure associated with the Architects' review of the proposed revisions, except to the extent the revisions are accepted by

execution of a Change Order.

§ 7.2.5 Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, any adjustments to the Contract Sum or the Contract Time.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

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

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

§ 7.3.3 PRICE ADJUSTMENTS

§ 7.3.3.1 If any Modification, including a Construction Change Directive, provides for an adjustment to the Contract Sum, the adjustment shall be based on whichever of the following methods is the most valid approximation of the actual cost to the contractor, with overhead and profit as allowed by Section 7.5:

- .1 Mutual acceptance of a lump sum;
- .2 Unit prices stated in the Contract Documents, except as provided in Section 7.3.4, or subsequently agreed upon;
- .3 Cost attributable to the events or situations under applicable clauses with adjustment of profits or fee, all as specified in the contract, or subsequently agreed upon by the parties, or by some other method as the parties may agree; or
- .4 As provided in Section 7.3.7.
- § 7.3.3.2 Consistent with Section 7.6, costs must be properly itemized and supported by substantiating data sufficient to permit evaluation before commencement of the pertinent performance or as soon after that as practicable. All costs incurred by the Contractor must be justifiably compared with prevailing industry standards. Except as provided in Section 7.5, all adjustments to the Contract Price shall be limited to job specific costs and shall not include indirect costs, overhead, home office overhead, or profit.
- § 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.
- § 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- § 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
- § 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall make an initial determination, consistent with Section 7.3.3, of the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in Section 7.5. In such case, and also under Section 7.3.3.1.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:
 - .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

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- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed:
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.
- § 7.3.8 Using the percentages stated in Section 7.5, any adjustment to the Contract Sum for deleted work shall include any overhead and profit attributable to the cost for the deleted Work.
- § 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.
- § 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

§ 7.5 AGREED OVERHEAD AND PROFIT RATES

- § 7.5.1 For any adjustment to the Contract Sum for which overhead and profit may be recovered, other than those made pursuant to Unit Prices stated in the Contract Documents, the Contractor agrees to charge and accept, as full payment for overhead and profit, the following percentages of costs attributable to the change in the Work. The percentages cited below shall be considered to include all indirect costs including, but not limited to: field and office managers, supervisors and assistants, incidental job burdens, small tools, and general overhead allocations. The allowable percentages for overhead and profit are as follows:
 - .1 To the Contractor for work performed by the Contractor's own forces, 17% of the Contractor's actual
 - .2 To each Subcontractor for work performed by the Subcontractor's own forces, 17% of the subcontractor's actual costs.
 - 3 To the Contractor for work performed by a subcontractor, 10% of the subcontractor's actual costs (not including the subcontractor's overhead and profit).

§ 7.6 PRICING DATA AND AUDIT

§ 7.6.1 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 \$500,000. 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 Subparagraph 9.10.4, such adjustments may be made after final payment to the Contractor.

§ 7.6.2 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.

§ 7.6.3 Records Retention

As used in Section 7.6, the term "records" means any books or records that relate to cost or pricing data that Contractor is required to submit pursuant to Section 7.6.1. 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.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

- § 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.
- § 8.1.2 The date of commencement of the Work is the date established in the Agreement.
- § 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.
- § 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

- § 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.
- § 8.2.2 The Contractor shall not knowingly commence operations on the site or elsewhere prior to the effective date of surety bonds and insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such surety bonds or insurance.
- § 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

- § 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the control of the Contractor and any subcontractor at any tier; or by delay authorized by the Owner pending dispute resolution; or by other causes that the Architect determines may justify delay, then to the extent such delay will prevent the Contractor from achieving Substantial Completion within the Contract Time and provided the delay (1) is not caused by the fault or negligence of the Contractor or a subcontractor at any tier and (2) is not due to unusual delay in the delivery of supplies, machinery, equipment, or services when such supplies, machinery, equipment, or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery, the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.
- § 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.
- § 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION § 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents. All changes to the Contract Sum shall be adjusted in accordance with Section 7.3.3.

§ 9.2 SCHEDULE OF VALUES

- § 9.2.1 The Contractor shall submit to the Architect, within ten days of full execution of the Agreement, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. As requested by the Architect, the Contractor and each Subcontractor shall prepare a trade payment breakdown for the Work for which each is responsible, such breakdown being submitted on a uniform standardized format approved by the Architect and Owner. The breakdown shall be divided in detail, using convenient units, sufficient to accurately determine the value of completed Work during the course of the Project. The Contractor shall update the schedule of values as required by either the Architect or Owner as necessary to reflect:
 - .1 the description of Work (listing labor and material separately);
 - .2 the total value;
 - .3 the percent and value of the Work completed to date;
 - .4 the percent and value of previous amounts billed; and
 - .5 the current percent completed and amount billed.
- § 9.2.2 Any schedule of values or trade breakdown that fails to include sufficient detail, is unbalanced, or exhibits "front-loading" of the value of the Work shall be rejected. If a schedule of values or trade breakdown is used as the basis for payment and later determined to be inaccurate, sufficient funds shall be withheld from future Applications for Payment to ensure an adequate reserve (exclusive of normal retainage) to complete the Work.

§ 9.3 APPLICATIONS FOR PAYMENT

- § 9.3.1 Monthly, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require (such as copies of requisitions from Subcontractors and material suppliers) and shall reflect retainage and any other adjustments provided in Section 5 of the Agreement. If required by the Owner or Architect, the Application for Payment shall be accompanied by a current construction schedule.
- § 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.
- § 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.
- § 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing provided such materials or equipment will be subsequently incorporated in the Work. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site. The Contractor shall 1) protect such materials from diversion, vandalism, theft, destruction, and damage, 2) mark such materials specifically for use on the Project, and 3) segregate such materials from other materials at the storage facility. The Architect and the Owner shall have the right to make inspections of the storage areas at any time.
- § 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

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

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated in both the Application for Payment and, if required to be submitted by the Contractor, the accompanying current construction schedule and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, or (3) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect shall withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. The Architect shall withhold a Certificate of Payment if the Application for Payment is not accompanied by the current construction schedule required by Section 3.10.1. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment:
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

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

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

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

- § 9.6.2 Pursuant to Chapter 6 of Title 29 of the South Carolina Code of Laws, as amended, the Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.
- § 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.
- § 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.
- § 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.
- § 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.
- § 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment to the Owner, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the time established in the Contract Documents the amount certified by the Architect or awarded by final dispute resolution order, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased, in accordance with the provisions of Section 7.3.3, by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION

- § 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use and when all required occupancy permits, if any, have been issued and copies have been delivered to the Owner.
- § 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive written list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- § 9.8.3 Upon receipt of the Contractor's list, the Architect, with the Owner and any other person the Architect or the Owner choose, will make an inspection on a date and at a time mutually agreeable to the Architect, Owner, and Contractor, to determine whether the Work or designated portion thereof is substantially complete. The Contractor shall furnish access for the inspection and testing as provided in this Contract. The inspection shall include a demonstration by the Contractor that all equipment, systems and operable components of the Work function properly and in accordance with the Contract Documents. If the Architect's inspection discloses any item, whether

or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. If more than one Substantial Completion inspection is required, the Contractor shall reimburse the Owner for all costs of re-inspections or, at the Owner's option, the costs may be deducted from payments due to the Contractor.

- § 9.8.3.1 If the Architect and Owner concur in the Contractor's assessment that the Work or a portion of the Work is safe to occupy, the Owner and Contractor may arrange for a Certificate of Occupancy Inspection by OSE. The Owner, Architect, and Contractor shall be present at OSE's inspection. Upon verifying that the Work or a portion of the Work is substantially complete and safe to occupy, OSE will issue, as appropriate, a Full or Partial Certificate of Occupancy.
- § 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.
- § 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

- § 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.
- § 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Unless the parties agree otherwise in the Certificate of Substantial Completion, the Contractor shall achieve Final Completion no later than thirty days after Substantial Completion. Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect, with the Owner and any other person the Architect or the Owner choose, will make an inspection on a date and at a time mutually agreeable to the Architect, Owner, and Contractor, and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will

constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. If more than one Final Completion inspection is required, the Contractor shall reimburse the Owner for all costs of re-inspections or, at the Owner's option, the costs may be deducted from payments due to the Contractor. If the Contractor does not achieve final completion within thirty days after Substantial Completion or the timeframe agreed to by the parties in the Certificate of Substantial Completion, whichever is greater, the Contractor shall be responsible for any additional Architectural fees resulting from the delay.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner, (6) required Training Manuals, (7) equipment Operations and Maintenance Manuals, (8) any certificates of testing, inspection or approval required by the Contract Documents and not previously provided (9) all warranties and guarantees required under or pursuant to the Contract Documents, and (10) one copy of the Documents required by Section 3:11.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is delayed 60 days through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

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

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

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

§ 9.10.6 If OSE has not previously issued a Certificate of Occupancy for the entire Project, the Parties shall arrange for a representative of OSE to participate in the Final Completion Inspection. Representatives of the State Fire Marshal's Office and other authorities having jurisdiction may be present at the Final Completion Inspection or otherwise inspect the completed Work and advise the Owner whether the Work meets their respective requirements for the Project.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY § 10.1 SAFETY PRECAUTIONS AND PROGRAMS

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

§ 10.2 SAFETY OF PERSONS AND PROPERTY

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

employees on the Work and other persons who may be affected thereby;

Init.

- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Subsubcontractors; and
- 3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- § 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- § 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.
- § 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.
- § 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.
- § 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.
- § 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

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

§ 10.3 HAZARDOUS MATERIALS

- § 10.3.1 If the Contractor encounters a hazardous material or substance which was not discoverable as provided in Section 3.2.1 and not required by the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons or serious loss to real or personal property resulting from such material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. Hazardous materials or substances are those hazardous, toxic, or radioactive materials or substances subject to regulations by applicable governmental authorities having jurisdiction, such as, but not limited to, the S.C. Department of Health and Environmental Control, the U.S. Environmental Protection Agency, and the U.S. Nuclear Regulatory Commission.
- § 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or

who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up. In the absence of agreement, the Architect will make an interim determination regarding any delay or impact on the Contractor's additional costs. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15. Any adjustment in the Contract Sum shall be determined in accordance with Section 7.3.3.

§ 10.3.3 The Work in the affected area shall be resumed immediately following the occurrence of any one of the following events: (a) the Owner causes remedial work to be performed that results in the absence of hazardous materials or substances; (b) the Owner and the Contractor, by written agreement, decide to resume performance of the Work; or (c) 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.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 In addition to its obligations under Section 3.18, the Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 Reserved.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7. The Contractor shall immediately give the Architect notice of the emergency. This initial notice may be oral followed within five days by a written notice setting forth the nature and scope of the emergency. Within fourteen days of the start of the emergency, the Contractor shall give the Architect a written estimate of the cost and probable effect of delay on the progress of the Work.

ARTICLE 11 INSURANCE AND BONDS § 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;

- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 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:

| General Aggregate (per project) | \$1,000,000 |
|----------------------------------|-------------------------------|
| Products/Completed Operations | \$1,000,000 |
| Personal and Advertising Injury | \$1,000,000 |
| Each Occurrence | \$1,000,000 |
| | \$50,000 |
| Medical Expense (Any one person) | \$5,000 |
| | Products/Completed Operations |

- .2 BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):
 - (a) Combined Single Limit \$1,000,000
- .3 WORKER'S COMPENSATION:
 - (a) State Statutory

(b) Employers Liability \$100,000 per Acc.
\$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 Section 11.1.2. The umbrella policy limits shall not be less than \$3,000,000.

§ 11.1.3 Prior to commencement of the Work, and thereafter upon replacement of each required policy of insurance, the Contractor shall provide to the Owner a written endorsement to the Contractor's general liability insurance policy that:

- .1 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;
- 2 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
- .3 provides that the Contractor's liability insurance policy shall be primary, with any liability insurance of the Owner as secondary and noncontributory.

Prior to commencement of the Work, and thereafter upon renewal or replacement of each required policy of insurance, the Contractor shall provide to the Owner a signed, original certificate of liability insurance (ACORD 25). Consistent with this Section 11.1, the certificate shall identify the types of insurance, state the limits of liability for each type of coverage, name the Owner a 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 as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required

by Section 11.1.2. 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.

§ 11.1.4 A failure by the Owner to either (i) demand a certificate of insurance or written endorsement required by Section 11.1, or (ii) reject a certificate or endorsement on the grounds that it fails to comply with Section 11.1, shall not be considered a waiver of Contractor's obligations to obtain the required insurance.

§ 11.2 OWNER'S LIABILITY INSURANCE

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

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Subsubcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 Reserved.

§ 11.3.1.3 Reserved.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Contractor shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 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.

§ 11.3.4 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 Change Order.

§ 11.3.5 Reserved.

§ 11.3.6 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 Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. 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.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, subsubcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, 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 Section 11.3 covers and pays for the damage, except such rights as they have to proceeds of such insurance held by the Contractor as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, subsubcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 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 Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 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.

§ 11.3.10 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.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 Before commencing any services hereunder, the Contractor shall provide the Owner with Performance and Payment Bonds, each in an amount not less than the Contract Price set forth in Article 4 of the Agreement. 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 written on Form SE-357, "Labor and Material Payment Bond", and both shall be made payable to the Owner.

- § 11.4.2 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.
- § 11.4.3 Any bonds required by this Contract shall meet the requirements of the South Carolina Code of Laws and Regulations, as amended.
- § 11.4.4 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK § 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the requirements specifically expressed in the Contract Documents, including inspections of work-in-progress required by all authorities having jurisdiction over the Project, it must, upon demand of the Architect or authority having jurisdiction, be uncovered for observation and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

- § 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.
- § 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2 unless otherwise provided in the Contract Documents.
- § 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents. If, prior to the date of Substantial Completion, the Contractor, a Subcontractor, or anyone for whom either is responsible, uses or damages any portion of the Work, including, without limitation, mechanical, electrical, plumbing, and other building systems, machinery, equipment, or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS § 13.1 GOVERNING LAW

The Contract, any dispute, claim, or controversy relating to the Contract, and all the rights and obligations of the parties shall, in all respects, be interpreted, construed, enforced and governed by and under the laws of the State of South Carolina, except its choice of law rules.

§ 13.2 SUCCESSORS AND ASSIGNS

The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole, or in part, without written consent of the other and then only in accordance with and as permitted by Regulation 19-445.2180 of the South Carolina Code of Regulations, as amended. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.3 WRITTEN NOTICE

Unless otherwise permitted herein, all notices contemplated by the Contract Documents shall be in writing and shall be deemed given:

- .1 upon actual delivery, if delivery is by hand;
- .2 upon receipt by the transmitting party of confirmation or reply, if delivery is by electronic mail, facsimile, telex or telegram;
- .3 upon receipt, if delivery is by the United States mail.

Notice to Contractor shall be to the address provided in Section 8.4.2 of the Agreement. Notice to Owner shall be to the address provided in Section 8.3.2 of the Agreement. Either party may designate a different address for notice by giving notice in accordance with this paragraph.

§ 13.4 RIGHTS AND REMEDIES

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

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

- § 13.4.3 Notwithstanding Section 9.10.4, the rights and obligations which, by their nature, would continue beyond the termination, cancellation, rejection, or expiration of this contract shall survive such termination, cancellation, rejection, or expiration, including, but not limited to, the rights and obligations created by the following clauses:
 - 1.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service;
 - 3.5 Warranty
 - 3.17 Royalties, Patents and Copyrights
 - 3.18 Indemnification
 - 7.6 Cost or Pricing Data
 - 11.1 Contractor's Liability Insurance
 - 11.4 Performance and Payment Bond
 - 15.1.6 Claims for Listed Damages
 - 15.1.7 Waiver of Claims Against the Architect
 - 15.6 Dispute Resolution
 - 15.6.5 Service of Process

§ 13.5 TESTS AND INSPECTIONS

- § 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.
- § 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.
- § 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.
- § 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.
- § 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.
- § 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

Payments due to the Contractor and unpaid under the Contract Documents shall bear interest only if and to the extent allowed by Title 29, Chapter 6, Article 1 of the South Carolina Code of Laws. Amounts due to the Owner shall bear interest at the rate of one percent a month or a pro rata fraction thereof on the unpaid balance as may be due.

§ 13.7 Reserved

§ 13.8 PROCUREMENT OF MATERIALS BY OWNER

The Contractor accepts assignment of all purchase orders and other agreements for procurement of 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 delivery, storage, insurance, installation, and testing of items covered in any assigned purchase orders or agreements. 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,.

§ 13.9 INTERPRETATION OF BUILDING CODES

As required by Title 10, Chapter 1, Section 180 of the South Caroline Code of Laws, as amended, OSE shall determine the enforcement and interpretation of all building codes and referenced standards on state buildings. The Contractor shall refer any questions, comments, or directives from local officials to the Owner and OSE for resolution.

§ 13.10 MINORITY BUSINESS ENTERPRISES

Contractor shall notify Owner of each Minority Business Enterprise (MBE) providing labor, materials, equipment, or supplies to the Project under a contract with the Contractor. Contractor's notification shall be via the first monthly status report submitted to the Owner after execution of the contract with the MBE. For each such MBE, the Contractor shall provide the MBE's name, address, and telephone number, the nature of the work to be performed or materials or equipment to be supplied by the MBE, whether the MBE is certified by the South Carolina Office of Small and Minority Business Assistance, and the value of the contract.

§ 13.11 SEVERABILITY

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.

§ 13.12 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 subsubcontractors; 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)

§ 13.13 SETOFF

The Owner shall have all of its common law, equitable, and statutory rights of set-off.

§ 13.14 DRUG-FREE WORKPLACE

The Contractor certifies to the Owner that Contractor will provide a Drug-Free Workplace, as required by Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.

§ 13.15 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.

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§ 13.16 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)

§ 13.17 OPEN TRADE (JUN 2015)

During the contract term, including any renewals or extensions, Contractor will not engage in the boycott of a person or an entity based in or doing business with a jurisdiction with whom South Carolina can enjoy open trade, as defined in SC Code Section 11-35-5300. [07-7A053-1]

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT § 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 45 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires substantially all Work to be stopped; or
- .2 An act of government, such as a declaration of national emergency that requires substantially all Work to be stopped;
- 3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents and the Contractor has stopped work in accordance with Section 9.7
- § 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.
- § 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages. Any adjustment to the Contract Sum pursuant to this Section shall be made in accordance with the requirements of Article 7.
- § 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

- § 14.2.1 The Owner may terminate the Contract if the Contractor
 - 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; or
 - .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

- § 14.2.2 When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:
 - 1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
 - .2 Accept assignment of subcontracts pursuant to Section 5.4; and
 - .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.
- § 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.
- § 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.
- § 14.2.5 If, after termination for cause, it is determined that the Owner lacked justification to terminate under Section 14.2.1, 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 under Section 14.4.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

- § 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.
- § 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Any adjustment to the Contract Sum made pursuant to this section shall be made in accordance with the requirements of Article 7.3.3. No adjustment shall be made to the extent
 - that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
 - .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

- § 14.4.1 The Owner may, at any time, terminate the Contract in whole or in part for the Owner's convenience and without cause. The Owner shall give written notice of the termination to the Contractor specifying the part of the Contract terminated and when termination becomes effective.
- § 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall
 - .1 cease operations as directed by the Owner in the notice;
 - .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work;
 - .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders; and
 - .4 complete the performance of the Work not terminated, if any.
- § 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, and any other adjustments otherwise allowed by the Contract. Any adjustment to the Contract Sum made pursuant to this Section 14.4 shall be made in accordance with the requirements of Article 7.3.3.

§ 14.4.4 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.

§ 14.4.5 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:

- .1 the termination was due to withdrawal of funding by the General Assembly, Governor, or State Fiscal Accountability Authority 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;
- .2 funding for the reinstated portion of the work has been restored;
- .3 circumstances clearly indicate a requirement for the terminated work; and
- .4 reinstatement of the terminated work is advantageous to the Owner.

§ 14.5 CANCELLATION AFTER AWARD BUT PRIOR TO PERFORMANCE

Pursuant to Title 11, Chapter 35 and Regulation 19-445.2085 of the South Carolina Code of Laws and Regulations, as amended, this contract may be canceled after award but prior to performance.

ARTICLE 15 CLAIMS AND DISPUTES § 15.1 CLAIMS § 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. 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. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Architect Such notice shall include sufficient information to advise the Architect and other party of the circumstances giving rise to the claim, the specific contractual adjustment or relief requested and the basis of such request. Claims by either party arising prior to the date final payment is due must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later except as stated for adverse weather days in Section 15.1.5.2. By failing to give written notice of a Claim within the time required by this Section, a party expressly waives its claim.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, including any administrative review allowed under Section 15.6, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will issue Certificates for Payment in accordance with the initial decisions and determinations of the Architect.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

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

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. Claims for an increase in the Contract Time shall be based on one additional calendar day for each full calendar day that the Contractor is prevented from working.

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

- .1 Claims for adverse weather shall be based on actual weather conditions at the job site or other place of performance of the Work, as documented in the Contractor's job site log.
- .2 For the purpose of this Contract, a total of five (5) days per calendar month (non-cumulative) shall be anticipated as "adverse weather" at the job site, and such time will not be considered justification for an extension of time. If, in any month, adverse weather develops beyond the five (5) days, the Contractor shall be allowed to claim additional days to compensate for the excess weather delays only to the extent of the impact on the approved construction schedule and days the contractor was already scheduled to work. The remedy for this condition is for an extension of time only and is exclusive of all other rights and remedies available under the Contract Documents or imposed or available by law.
- .3 The Contractor shall submit monthly with their pay application all claims for adverse weather conditions that occurred during the previous month. The Architect shall review each monthly submittal in accordance with Section 15.5 and inform the Contractor and the Owner promptly of its evaluation. Approved days shall be included in the next Change Order issued by the Architect. Adverse weather conditions not claimed within the time limits of this Subparagraph shall be considered to be waived by the Contractor. Claims will not be allowed for adverse weather days that occur after the scheduled (original or adjusted) date of Substantial Completion.

§ 15.1.6 CLAIMS FOR LISTED DAMAGES

Notwithstanding any other provision of the Contract Documents, including Section 1.2.1, 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.

§ 15.1.6.1 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 Section 13.6 (Interest), (viii) lost revenue and profit for lost use of the property, (ix) costs resulting from lost productivity or efficiency.

§ 15.1.6.2 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 Section 13.6 (Interest); (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 termination in accordance with Article 14.

§ 15.1.6.3 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. This mutual waiver is not applicable to amounts due or obligations under Section 3.18 (Indemnification).

§ 15.1.7 WAIVER OF CLAIMS AGAINST THE ARCHITECT

Notwithstanding any other provision of the Contract Documents, including Section 1.2.1, 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 waive as against the Owner. This mutual waiver is not applicable to amounts due or obligations under Section 3.18 (Indemnification).

§ 15.2 Reserved.

§ 15.3 Reserved.

§ 15.5 CLAIM AND DISPUTES - DUTY OF COOPERATION, NOTICE, AND ARCHITECTS INITIAL DECISION

- § 15.5.1 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 and the Architect 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.
- § 15.5.2 Claims shall first be referred to the Architect for initial decision. An initial decision shall be required as a condition precedent to resolution pursuant to Section 15.6 of any Claim arising prior to the date of final payment, unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered, or after all the Architect's requests for additional supporting data have been answered, whichever is later. The Architect will not address claims between the Contractor and persons or entities other than the Owner.
- § 15.5.3 The Architect will review Claims and within ten days of the receipt of a Claim (1) request additional supporting data from the claimant or a response with supporting data from the other party or (2) render an initial decision in accordance with Section 15.5.5.
- § 15.5.4 If the Architect requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Architect when the response or supporting data will be furnished or (3) advise the Architect that all supporting data has already been provided. Upon receipt of the response or supporting data, the Architect will render an initial decision in accordance with Section 15.5.5.
- § 15.5.5 The Architect will render an initial decision in writing; (1) stating the reasons therefor; and (2) notifying the parties of any change in the Contract Sum or Contract Time or both. The Architect will deliver the initial decision to the parties within two weeks of receipt of any response or supporting data requested pursuant to Section 16.4 or within such longer period as may be mutually agreeable to the parties. If the parties accept the initial decision, the Architect shall prepare a Change Order with appropriate supporting documentation for the review and approval of the parties and the Office of State Engineer. If either the Contractor, Owner, or both, disagree with the initial decision, the Contractor and Owner shall proceed with dispute resolution in accordance with the provisions of Section 15.6.
- § 15.5.6 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.6 DISPUTE RESOLUTION

- § 15.6.1 If a claim is not resolved pursuant to Section 15.5 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 15.6.2.
- § 15.6.2 If after meeting in accordance with the provisions of Section 15.6.1, 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 Article 15, all claims, 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 in the absence of jurisdiction 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 State's Constitution.

§ 15.6.3 If any party seeks resolution to a dispute pursuant to Section 15.6.2, 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.

§ 15.6.4 Without relieving any party from the other requirements of Sections 15.5 and 15.6, either party may initiate proceedings in the appropriate forum prior to initiating or completing the procedures required by Sections 15.5 and 15.6 if such action is necessary to preserve a claim by avoiding the application of any applicable statutory period of limitation or repose.

§ 15.6.5 SERVICE OF PROCESS

Contractor consents that any papers, notices, or process necessary or proper for the initiation or continuation of any claims, 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 mail.

ARTICLE 16 PROJECT-SPECIFIC REQUIREMENTS AND INFORMATION § 16.1 INSPECTION REQUIREMENTS (Indicate the inspection services required by the Contract) Special Inspections are required and are not part of the Contract Sum. (see section 01400) Building Inspections are required and are not part of the Contract Sum. (see section 01400) The inspections required for this Work are: (Indicate which services are required and the provider) Civil: Froehling & Robertson, Inc. Structural: Mechanical: Plumbing: Electrical: Gas: Other (list): Storm Water Control - Freeland and Associates, Inc. Remarks: § 16.1.1 Contractor shall schedule and request inspections in an orderly and efficient manner and shall notify the Owner whenever the Contractor schedules an inspection in accordance with the requirements of Section 16.1.

§ 16.1.1 Contractor shall schedule and request inspections in an orderly and efficient manner and shall notify the Owner whenever the Contractor schedules an inspection in accordance with the requirements of Section 16.1. Contractor shall be responsible for the cost of inspections scheduled and conducted without the Owner's knowledge and for any increase in the cost of inspections resulting from the inefficient scheduling of inspections.

§ 16.2 List Cash Allowances, if any. (Refer to attachments as needed, or enter NONE)

None

not be reproduced prior to its completion.

| § 16.3 Requirements for Record Drawings, if any. (Refer to attachments as needed, or enter NONE) None |
|---|
| § 16.4 Requirements for Shop Drawings and other submittals, if any, including number, procedure for submission, list of materials to be submitted, etc. (Refer to attachments as needed, or enter NONE) None |
| § 16.5 Requirements for signage, on-site office or trailer, utilities, restrooms, etc., in addition to the Contract, if any. (Refer to attachments as needed, or enter NONE) |
| As necessrary in accordiance with OSHA, Department of Labor, DHEC, and contractor requirments. |
| |
| § 16.6 Requirements for Project Cleanup in addition to the Contract, if any. (Refer to attachments as needed, or enter NONE) |
| None |
| |
| § 16.7 List all attachments that modify these General Conditions. (If none, enter NONE) |
| None |
| |
| |
| |

SE-355

PERFORMANCE BOND

| | 2:24 24 1 (22) 25 (2) 135 | |
|-----------------|--|---|
| KNOW ALL | MEN BY THESE PRESENTS, that (Insert full | name or legal title and address of Contractor) |
| Name: | | |
| Address: | | |
| hereinafter ref | Cerred to as "Contractor", and (Insert full name and a | address of principal place of business of Surety) |
| Name: | | |
| Address: | A | |
| hereinafter cal | led the "surety", are jointly and severally held a | and firmly bound unto (Insert full name and address of Agency) |
| Name: | Greenville Technical College | |
| Address: | | |
| | Greenville, SC 29606 | |
| of the Bond to | erred to as "Agency", or its successors or assign to which payment to be well and truly made, the successors and assigns, jointly and severally, the | ns, the sum of(\$), being the sum he Contractor and Surety bind themselves, their heirs, executors, firmly by these presents. |
| WHEREAS, | Contractor has by written agreement dated | entered into a contract with Agency to construct |
| State Proj | ect Name: Greenville - Bldg. 502 Demolition | |
| State Proj | ect Number: H59-N834-JM | |
| Brief Des | cription of Awarded Work: Abate asbestos, den | nolitsh building, remove slab, grade and stone area. |
| in accordance | with Drawings and Specifications prepared by | (Insert full name and address of A/E) |
| Name: | Seamon Whiteside & Associates / Terracon C | Consultants |
| Address: | 508 Rhett St. Ste. 101 (SWA) / 72 Pointe Circ | cle (Terracon) |
| | Greenville, SC 29601 (SWA) / 29615 (Terrac | con) |
| which agreeme | ent is by reference made a part hereof, and is he | ereinafter referred to as the Contract. |
| | | g to be legally bound hereby, subject to the terms stated herein, do behalf by its authorized officer, agent or representative. |
| DATED this | day of, 2 | BOND NUMBER |
| | hall be no earlier than Date of Contract) | |
| | | |
| CONTRAC | FOR | SURETY |
| Ву: | | By: |
| | (Seal) | (Seal) |
| Print Name: | | Print Name: |
| Print Title: | | Print Title: |
| | | (Attach Power of Attorney) |
| Witness: | | Witness: |
| 74 I II 1 I I I | | |

1 of 2

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

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 si 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.

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LABOR & MATERIAL PAYMENT BOND

| KNOW ALL | MEN BY THESE PRESENTS, that (Insert full | name or legal title and address of Contractor) |
|-------------------------------|--|---|
| Name: | | |
| Address: | | |
| 1 . 0 | | |
| Name: | ferred to as "Contractor", and (Insert full name and a | |
| Address: | - | |
| Address. | | |
| hereinafter ca | lled the "surety", are jointly and severally held | and firmly bound unto (Insert full name and address of Agency) |
| Name: | | |
| Address: | DO D #616 | |
| | Granvilla SC 20606 | |
| of the Bond t | | ns, the sum of(\$), being the sum he Contractor and Surety bind themselves, their heirs, executors, firmly by these presents. |
| WHEREAS, | Contractor has by written agreement dated | entered into a contract with Agency to construct |
| | | |
| | ect Number: H59-N834-JM | |
| Brief Des | cription of Awarded Work: Abate asbestos, der | nolish building, remove slab, grade and stone area. |
| in accordance | with Drawings and Specifications prepared by | (Insert full name and address of A/E) |
| Name: | Seamon-Whiteside & Associates / Terracon C | Consultants (asbestos abatement) |
| Address: | 508 Rhett St. Ste. 101 (SWA) / 72 Pointe Cir. | (Terracon) |
| | Greenville, SC 29601 (SWA) 29615 (Terraco | n) |
| which agreem | ent is by reference made a part hereof, and is he | ereinafter referred to as the Contract. |
| each cause the representative | is Labor & Material Payment Bond to be o | g to be legally bound hereby, subject to the terms stated herein, do duly executed on its behalf by its authorized officer, agent or DND NUMBER |
| CONTRACT | OR | SURETY |
| Ву: | | Ву: |
| | (Seal) | (Seal) |
| Print Name: | | Print Name: |
| Print Title: | | Print Title: |
| | | (Attach Power of Attorney) |
| Witness: | | Witness: |
| (Additional Sign | natures, if any, appear on attached page) | |

1 of 2 SE-357

LABOR & 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.

2 of 2 SE-357

| CH | ANGE ORDER TO DESIGN-BID-BUILD CO | NSTRU | ICTION CO | NTRACT |
|-------|--|-------|---|----------|
| AGI | ENCY: Greenville Technical College | | | |
| PRO | NECT NAME: Cooperation Did 500 Demotition | | | |
| | DJECT NUMBER: H59-N834-JM | | | |
| CON | TRACTOR: | | CONTRACT D | OATE: |
| This | Contract is changed as follows: (Insert description of change in space provided be | | | |
| AD. | JUSTMENTS IN THE CONTRACT SUM: | | | |
| 1. | Original Contract Sum: | | | \$ |
| 2. | Change in Contract Sum by previously approved Change Orders: | | | |
| 3. | Contract Sum prior to this Change Order | | | \$ 0.00 |
| 4. | Amount of this Change Order: | | | |
| 5. | New Contract Sum, including this Change Order: | | (************************************ | \$ 0.00 |
| AD. | JUSTMENTS IN THE CONTRACT TIME: | | | 198 |
| 1. | Original Substantial Completion Date: | | | |
| 2. | Sum of previously approved increases and decreases in Days: | | | Days |
| 3. | Change in Days for this Change Order | | | Days |
| 4. | New Substantial Completion Date: | | | |
| CON | TRACTOR ACCEPTANCE: | | | |
| BY | | | Date: | |
| Pri | (Signature of Representative) nt Name of Representative: | | | |
| | RECOMMENDATION FOR ACCEPTANCE: | | | |
| BY | i | | Date: | |
| | (Signature of Representative) | | | |
| Pri | nt Name or Representative: | | | |
| AGE | NCY ACCEPTANCE AND CERTIFICATION: | | | |
| BY | · | | Date: | |
| | (Signature of Representative) | | | |
| Pri | nt Name of Representative: | | | |
| Chang | ge is within Agency Construction Contract Change Order Certification of: | \$ | | Yes No N |
| AUTI | HORIZED BY: | | DATE: | |
| | HORIZED BY:(OSE Project Manager) | | | |

SUBMIT THE FOLLOWING TO OSE

- SE-380, fully completed and signed by the Contractor, A/E and Agency;
 Detailed back-up information, with OH&P shown, from the Contractor/Subcontractor(s) that justifies the costs and schedule changes shown.
 If any item exceeds Agency certification, OSE will authorize the SE-380 and return to Agency.

SECTION 011000

SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Greenville Bldg. 502 Demolition
- B. Project Location: 226 S. Pleasantburg Dr. Greenville, SC 29607
- C. Owner's Name: Greenville Technical College
- D. Architects: Seamon Whiteside (Civil) Joe Bryant; Terracon Consultants (Asbestos/Demolition) George Flores.
- E. The project consist of asbestos abatement, building demolition and removal, site grading.

1.02 DESCRIPTION OF ALTERATIONS WORK

A. Scope of work is shown on drawings.

1.03 WORK BY OWNER

A. Disconnect utilities coordinated by owner

1.04 OWNER OCCUPANCY

- A. Owner has abandoned building.
- B. Buildings on both sides of building 502 are occupied and in operation Monday Saturday 8:00 AM 5 PM.

1.05 CONTRACTOR USE OF SITE

A. Do not obstruct roadways, sidewalks, or other public ways without permit.

1.06 WORK SEQUENCE

A. coordinate construction schedule and operations with Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 011000

011000-1 SUMMARY

SECTION 024100 DEMOLITION

PART 1 GENERAL

1.01 GENERAL PROVISIONS

- A. Attention is directed to the Contract and General Conditions and all Sections within Division 1 General Requirements, which are hereby made a part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of the contract and general conditions.

1.02 DESCRIPTION OF WORK

- A. The Contractor shall provide labor, materials and equipment to complete the general and selective demolition of the building and selective demolition of site items as described. Generally, the demolition work shall include, but not be limited to:
 - 1. File all necessary notices, obtain all permits and licenses, and pay all governmental taxes, fees, and other costs in connection with the work. Obtain all necessary approvals of all governmental departments having jurisdiction.
 - 2. The Contractor, in the presence of the Architect or Owner, shall take photographs or record a video tape of existing conditions adjacent to the site, including sidewalks, curbing, utility structures, light poles, and other features.
 - 3. Demolition and removal of designated building and site items within the Limit of Work. Refer to civil drawings for additional site items to be removed.
 - 4. Demolition and removal of all foundation walls.
 - 5. Removal of designated pavement. Disturbance of bituminous concrete pavement shall be limited to that necessary to cut and cap utilities within the minimum distance from the building to be demolished, as necessary. Damage to pavement, landscaped areas, and other structures/areas outside of this minimum distance shall be repaired by the Contractor at no additional cost to the Owner.
 - 6. Segregation and shipment of uncoated asphalt, brick and concrete (ABC) materials from building for off-site crushing and reuse/recycling.
 - 7. Segregation and off-site disposal of coated asphalt, brick and concrete (ABC) from building.
 - 8. Removal and recycling/disposal of demolished materials are at the Contractor's expense. Except for those items specifically designated to be turned over to the Owner, all existing removed materials, items, trash, and debris shall become the property of the Contractor and shall be completely removed from the site and legally disposed, recycled, and salvaged at the Contractor's expense. Onsite sale of material is not permitted.
 - 9. Protection of site structures and features that are designated to remain.
 - 10. Scheduling and sequencing operations without interrupting utilities serving occupied areas. If interruption is required, obtain written permission from the utility company and the Owner. Provide temporary services as necessary to serve occupied and usable facilities when permanent utilities must be interrupted, or schedule interruption when the least amount of inconvenience will result.
 - 11. Refer to project requirements on drawings for selective demolition. Coordinate activities to prevent damages to adjacent properties during selective demolition.

1.03 REFERENCE STANDARDS

The publications listed-below form a part of this specification to the extent referenced. The publications are referenced in text by basic designation only. The list provided below is not intended to be all inclusive of each regulation prevailing over the work. The latest version of the document listed shall govern the work performed.

- A. American National Standard Institute, A10.6-2006, <u>Safety Requirements for Demolition for Construction and Demolition Operations</u>.
- B. National Fire Protection Association, 241, <u>Standard for Safeguarding Construction</u>, <u>Alteration</u>, <u>and Demolition Operations</u>.

1.05 DEFINITIONS

- A. Contractor: Refers to the General Contractor and/or Subcontractor responsible for the Work under contract.
- B. ABC: Asphalt, Brick and Concrete
- C. ANSI: American National Standards Institute
- D. Coated ABC: Coated brick, concrete and concrete masonry units. Coatings shall include, but not be limited to: paint, stucco applications, plaster, etc.
- E. Demolition: Total or selective destruction of building or portions of buildings; removal of building materials for renovation projects
- F. Disposal: Removal off-site of demolition and construction debris and subsequent sale, recycling, reuse, or deposit in a permitted solid waste landfill or incinerator acceptable to authorities having jurisdiction.
- G DOT: Department of Transportation
- H. Architect: Authorized representative of the Owner. Architect shall be the Architect of Record for the project.
- IMPLOSION: Use of explosives for structure demolition.
- J. NFPA: National Fire Protection Association.
- K. OSHA: Occupational Safety and Health Administration
- Remove: Remove and reuse, recycle, treat and dispose of items except those indicated to be reinstalled, salvaged, or to remain on the Owner's property.
- M. Remove and Salvage: Items indicated to be removed and salvaged remain on the property. Carefully remove, clean, and pack or crate items to protect against damage. Prepare and attach all packed or crated items to wood pallets for outside storage. Identify contents of containers and deliver to the Owner's designated storage area.
- N. SCDHEC: South Carolina Department of Health and Environmental Control
- O. USEPA: United States Environmental Protection Agency

1.06 SCHEDULE

- A. The Contractor shall develop a demolition schedule for each phase of the work prior to the Pre-Construction Conference. The Owner and Architect shall approve any proposed alterations the work sequence to meet the specific needs of the project.
- B. The Contractor shall not perform total or selective demolition of the building until A Certificate of Abatement has been issued which could take up to 90 days after the Notice to Proceed for this project.
- C. The Contractor shall update the schedule and submit any schedule changes for review by the Architect at the weekly construction meetings.

1.07 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition that all recyclable demolition material shall be recycled and non-recyclable material shall be disposed at an approved facility.

1.08 SUBMITTALS

A. The Contractor shall submit each item in this Article according to the Conditions of the Contract for information only, unless otherwise indicated.

B. Shop Drawings:

- 1. Scaffolding details
- 2. Temporary shoring
- D. Quality Control Submittals (prior to commencement of onsite demolition):
 - 1. Methods of demolition and equipment proposed to demolish structure. Demolition means and methods must be approved by the Owner and Owner's Structural Engineer.
 - 2. Waste Management Plan to indicate the types of wastes to be removed from the project and the proposed reuse, recycling, treatment and disposal locations. Include names and addresses of back-up reuse, recycling, treatment and disposal facilities.
 - 3. Copies of any authorizations and permits required to perform the work, including disposal/recycling facility permits.
 - 4. Contract Closeout Submittals (throughout project and prior to authorization of final payment):
 - Records of the amounts of waste generated, by waste type and facilities where these materials were shipped for reuse, recycling, treatment and/or disposal.
 - b. Evidence (shipping manifests and weight receipts) of lawful reuse, recycling, treatment or disposal of all wastes generated.

F. Schedule of Demolition Activities:

- 1. Detailed sequence of demolition and removal work, with early and late starting and finishing dates for each activity. Ensure onsite operations are uninterrupted if applicable.
- 2. Interruption of utility services. Indicate how long utility services will be interrupted.
- 3. Coordination for shutoff, capping, and continuation of utility services.
- 4. Locations of proposed dust- and noise-control temporary partitions and means of egress.
- 5. Means of protection for items to remain and items in path of waste removal from building.
- G. Inventory: After demolition is complete, submit a list of items that have been removed and salvaged and where the material will be delivered for disposal and/or recycling.
- H. Pre-Demolition Photographs or Videotapes: Show existing conditions in sufficient detail of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.
- I. Disposal Records: Provide material shipping records and/or waste manifests (i.e., for offsite waste management)] indicating receipt and acceptance of solid by the disposal facility.

1.09 REGULATORY REQUIREMENTS

- A. The Contractor is solely responsible for obtaining permits or approvals which may be required to perform the work of this section, including all costs, fees and taxes required or levied. Notify and obtain such permits or approvals from all agencies having jurisdiction over demolition prior to starting work including, but not limited to local, state and federal agencies.
- B. Comply with all applicable federal, state, and local safety and health requirements regarding the demolition of structures and other site features as applicable.
- C. Notify the Owner and Architect immediately upon discovery of any hazardous materials detected on site after Certificate of Abatement has been issued.

1.10 QUALITY ASSURANCE

A. Examination of Existing Conditions: The Contractor shall examine the Drawings for demolition and removal requirements and provisions for new Work. Verify all existing conditions and dimensions before commencing Work. The Contractor shall visit the site and examine the existing conditions and shall inform herself/himself of the character, extent and type of demolition and removal Work to be performed. The Contractor shall submit any questions regarding the extent and character of the demolition and removal work in the manner and within the time period established for receipt of such questions during the bidding period.

- B. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- C. Regulatory Requirements: Comply with governing USEPA and SCDHEC notification regulations before beginning demolition. Comply with local, state and federal hauling and reuse/recycling/treatment/disposal regulations. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Pre-demolition Conference: Conduct conference at the Site. Review methods and procedures related to selective demolition including, but not limited to, the following:
 - 1. Inspect and discuss condition of construction to be demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by demolition operations.

1.11 PROJECT CONDITIONS

- A. The Owner/Architect/Engineers assume no responsibility for actual condition of buildings to be demolished.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by the Owner as far as practical.
- C. Asbestos and other hazardous materials are present in the building and are to be removed

1.12 DEMOLITION BY IMPLOSION

Use of explosives will not be allowed on this project.

PART 2 PRODUCTS

2.1 MATERIALS

All materials required to complete the work under this Section shall conform to the standards and requirements of local codes, ordinances, municipalities, regulatory agencies, utility companies and other agencies having jurisdiction over the work to be performed.

PART 3 EXECUTION

3.01 GENERAL

- A. Verify site conditions before proceeding with demolition work. Inspect structure and utilities prior to start of work and notify the Architect in writing, of any hazardous conditions and/or discrepancies. The structure to be demolished consists of the former Belk Simpson structure, the concrete slab, associated concrete walks, the pads, asphalt pavement, miscellaneous street signs, and lamp posts. Refer to civil drawings and coordinate.
 - 1. Unknown Site Conditions The information provided in the Specifications is believed accurate, but the Contractor should field verify all information. The Contractor shall bear full responsibility for obtaining all locations of underground structures, utilities and their connections. Services to buildings outside the Limits of Work shall be maintained and all resulting costs or charges shall be the responsibility of the Contractor.
 - 2. Interior Elements Interior features including but not necessarily limited to structural elements, walls, partitions, equipment, piping or other building facilities must be visually inspected prior to submittal of bid, and again prior to initiation of on-site work. The Contractor shall be responsible for performing its own inspection and appraisal of all features and facilities to be demolished or removed for salvage. The Contractor shall also investigate to assure itself of the condition of the work to be demolished and shall take all precautions necessary to ensure safety of people and property.
- B. The demolition of the building and related appurtenances shall be accomplished by methods which will not cause damage to surrounding structures, underground and overhead utilities, or

other existing items and structures that are to remain in place. All debris shall be promptly and properly managed as the demolition progresses. Construct and/or prepare material Staging/Stockpile areas as required at locations approved by the Owner.

3.02 UTILITY SERVICES

Terminate utilities serving the building except as necessary for operation of the adjacent mall prior to commencing demolition of the building.

3.03 WORK RESTRICTIONS

A. Burning is not permitted.

3.04 PREPARATION

- A. Site Access and Temporary Controls: Conduct demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities. Damage or impact to any public or private property including sidewalks, roadways, landscape areas, or buildings/structures will be immediately repaired at no cost to the Owner.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from the city and/or SCDOT, as applicable. Provide alternate routes around closed or obstructed traffic ways as required by governing regulations. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around selective demolition area.
 - 2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways to limit site access to the general public.
 - 3. Protect existing site improvements and appurtenances to remain.
- B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability prevent unexpected or uncontrolled movement or collapse of construction being demolished and as required to prevent damage to adjacent buildings, structures, or property not part of this work. All shoring, bracing, and structural supports shall be designed by a South Carolina licensed structural engineer and submitted to the I Architect for review at least 10 working days prior to initiating demolition activities.
 - 1. Strengthen or add new supports when required during progress of demolition.
 - 2. Remove temporary shoring, bracing and structural supports when no longer required.
 - 3. Post warning signs and place barricades as applicable during placement and removal of temporary shoring.
 - 4. Conform with OSHA safe excavation and excavation support regulations for any and all shoring work.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
 - Erect temporary protection, such as walks, fences, and overhead protection (if applicable)
 where required by authorities having jurisdiction. Provide temporary barricades as required
 to limit access to demolition areas.
- D. Erect a temporary separation wall between the occupied section of the mall and the former Belk Simpson structure.
 - Construction details shall comply with recognized time-rated fire-resistive construction.
 Typically, 1-hour rated partitions shall be 3-1/2 inch metal studs at 16-inches on center,
 with 5/8-inch thick Type X gypsum board at both faces, with joints filled, taped and topped.
 - 2. Seal partition perimeters with acceptable fire stopping and smoke seal materials.
 - Removal of Temporary Barriers and Enclosures: Unless otherwise mutually agreed by University's Representative and Contractor, remove temporary materials, equipment, services, and construction prior to Contract Completion review.

E. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.

F. Utilities:

- 1. The Contractor must to request a utility mark-out for the Site at no additional cost to the Owner prior to performing any demolition work.
- 2. Terminate utilities serving the building prior to commencing demolition.

3.05 DEMOLITION

A. General:

Demolish and remove existing construction including the ground-level floor slab. Surface materials including the building slab, sidewalks, and asphalt pavement is also included. Remove all finish floor coverings and associated glues/mastics (not removed during asbestos abatement) from foundation slab. All ground-level utility penetrations shall be cut off a minimum of two feet below ground surface and permanently sealed. Use methods required to complete the Work within limitations of governing regulations and as follows:

- 1. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
- 2. Maintain adequate ventilation when using cutting torches.
- 3. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
- 4. Locate demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 5. Dispose of demolished items and materials promptly.

B. Structure Demolition

- Demolish and completely remove existing building within the Limit of Work. Structure demolition shall include the demolition of all structural and non-structural building elements, mechanical systems, equipment, other items within the building, and appurtenances and ancillary components within, and fixed to, the building except as otherwise specified herein. All equipment and other items within the building shall be demolished as required and removed for reuse, recycling, or lawful disposal.
- 2. Coordinate selective demolition requirements as shown on the drawings.
- 3. All building foundation components and related elements including floor slab shall remain in-place.
- 4. Ensure no unstable building elements are left unsupported. Place and secure bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this Contract. During demolition, the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, or other structural element shall be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.
- C. Surrounding Facilities:
- D. All demolition debris is to be disposed offsite at an appropriate waste disposal and/or recycling facility. No crushing operations will be permitted on the site except as necessary to reduce

material to a size suitable for offsite shipment

3.06 SELECTIVE DEMOLITION FOR ALTERATIONS

Not applicable

3.07 DISPOSAL

- A. <u>Disposal of demolition Materials Removed from Site</u> Reuse, recycle, treat and dispose all material from demolition (i.e. metals, wood, concrete, miscellaneous waste, etc.) as well as all equipment and other materials that are within the building. The loading of demolition materials shall be performed in a manner that prevents materials and activities from generating excessive dust and ensure minimum interference with roads, sidewalks and streets both onsite and offsite.
- B. <u>Facility Documentation</u>- Provide evidence, on an ongoing basis, that demolition materials have been received at the designated recycle, reuse, salvage, or disposal facility. Documentation shall include but not limited to weight receipts, manifests, bills of lading, etc. Transport of all materials off site shall be in accordance with applicable DOT Regulations. All materials leaving the site shall become the property of Contractor unless otherwise specified herein.

3.08 BACKFILLING

Preformed as indicated on civil drawings.

3.09 DUST CONTROL

The contractor shall implement fugitive dust suppression to prevent unacceptable levels of dust resulting from demolition operations or other activities required by the Contract. It shall be the Contractor's responsibility to supervise fugitive dust control measures and to visually monitor airborne particulate matter.

End of section 024100

3.10 CLEANUP

Remove all debris, residuals, and materials at the conclusion of demolition activities.

024100 DEMOLITION



March 17, 2017

Greenville Technical College PO Box 5616 Greenville, South Carolina 29606

Attn: Mr. Bill Tripp

Email: bill.triop@gvltec.edu

Re: Asbestos and Lead-Based Paint Survey Report

Greenville Technical College - Building 502

South Pleasantburg Drive Greenville, South Carolina Terracon Project No. 86177029

Dear Mr. Tripp:

Terracon Consultants, Inc. (Terracon) is pleased to present the results of the asbestos and lead based-paint survey performed on Greenville Technical College Building 502. We understand that this survey was requested due to the planned demolition of the structure. Our services were performed in general accordance with our Proposal No: P86177029 dated February 7, 2017.

Asbestos-containing materials (ACM) and lead-based paint (LBP) were identified in samples of suspect materials collected during our survey; please refer to the report for details.

Terracon appreciates the opportunity to provide environmental consulting services to you on this project. If you should have any questions regarding this report, please contact the undersigned at (864) 292-2901.

Sincerely,

Terracon Consultants, Inc.

Stephen N. Ellis

Staff Industrial Hygienist

George K/Flores, PE

Environmental Department Manager

Asbestos and Lead-Based Paint Survey Report

GREENVILLE TECHNICAL COLLEGE – BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA

> March 17, 2017 Terracon Project No. 86177029



Prepared for:

Greenville Technical College Greenville, South Carolina

Prepared by:

Terracon Consultants, Inc. Greenville, South Carolina

Inspected by:

Stephen N. Ellis and Thomas H. Tripp SC DHEC Asbestos Inspector Nos. BI-01211 and BI-00841 Inspected on February 22 and March 2, 2017

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Environmental

Facilities

Geotechnical

Materials

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GTC Building 502 Greenville, South Carolina March 17, 2017 Terracon Project No. 86177029



EXECUTIVE SUMMARY

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead based-paint survey performed on the former Allied Health Building (Building 502) on South Pleasantburg Drive in Greenville, South Carolina. Our survey was conducted on February 22, 2017 with supplementary sampling performed on March 2, 2017, in advance of the planned demolition of the structure and in general accordance with the terms of our Proposal No: P86177029 dated February 7, 2017. This Executive Summary is intended as an overview for the convenience of the reader. The complete report must be reviewed in its entirety prior to making decisions regarding this site.

The asbestos-containing material (ACM) survey was performed by South Carolina Department of Health and Environmental Control (SC DHEC) licensed asbestos building inspectors in general accordance with the sampling protocols established in Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) 763 (Asbestos Hazard Emergency Response Act, AHERA) and the SC DHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects.

ASBESTOS

A total of 109 bulk samples were collected from the structure. A general layout with sample locations is included as Figure 1 in Appendix A. Sample descriptions, locations, analytical results, classification and estimated quantities are summarized in Table 1 in Appendix B. Copies of the asbestos laboratory analytical reports are included in Appendix C and photographic documentation is provided in Appendix E.

Asbestos was detected or assumed in samples of the following materials:

- Drywall joint compound (3% chrysotile) in the front office area;
- Gray caulking (3% chrysotile) on interior window/door system in the front office area;
- Black/white caulking (10% chrysotile) on perimeter window/door system in the front office area;
- Block wall filler (3.6% chrysotile) in the open middle area;
- Gray caulking (2% chrysotile) on interior window system in the rear area;
- Black roof mastic (3.0% chrysotile); and,
- Light fixture gasket (assumed to contain asbestos) in the front area HVAC closet.

Initially, five samples of drywall joint compound were collected from the front area. Based on the mixed results obtained from this sampling, Terracon collected seven addition samples from this area on March 3, 2017 in an effort to delineate the extent of the asbestos containing joint compound. After evaluation of the laboratory results in total, Terracon concluded that the entire gypsum wallboard system in the front area should be considered asbestos containing.

GTC Building 502 Greenville, South Carolina March 17, 2017 Terracon Project No. 86177029



Materials containing greater than 1% asbestos should be removed by an SC DHEC-licensed abatement contractor prior to beginning demolition. Based on the quantity and type of materials present a project design must be written for this work scope. Additionally third party asbestos air monitoring must be performed during prior to, during, and at the conclusion of the abatement of the regulated materials.

A copy of this report must be submitted to SC DHEC at least ten (10) working days prior to demolition.

LEAD

One hundred three (103) areas of painted components within the structure were analyzed by XRF and the results are summarized in Table 2 in Appendix B. Several materials had detectable amounts of lead-containing paints with five of the coatings containing lead at concentrations equal to or exceeding 0.7 mg/cm². Paints exceeding 0.7 mg/cm² are summarized below.

- Crème paint on a mop sink in the front office area;
- Black paint on an interior door frame in the rear area;
- Black paint on an interior door frame in the mechanical room;
- Tan paint on a brick wall on the exterior of the building; and,
- Tan paint on a window sill on the exterior of the building.

To supplement the XRF results, four paint-chip samples were collected from various components and submitted for laboratory analysis. Three of the four samples contained detectable amounts of lead. Lead was detected in at concentrations exceeding the 0.06% by weight regulatory threshold in two of the samples. Table 3 in Appendix B provides a summary of the results. A copy of the laboratory data report and chain-of-custody form is included in Appendix C.

Based upon the above results, the paint systems in and on the structure should be considered lead-containing for the purpose of OSHA compliance. Further, components coated with lead based paint can, by regulation, be disposed of at a Class II (i.e., C&D) landfill. However, the prospective disposal facility should be contacted for its approval prior to shipment of the waste from the site.

ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT

GREENVILLE TECHNICAL COLLEGE
BUILDING 502
SOUTH PLEASANTBURG DRIVE
GREENVILLE, SOUTH CAROLINA
Terracon Project No. 86177029

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead based-paint survey performed on the former Allied Health Building [Greenville Technical College (GTC) Building 502] on South Pleasantburg Drive in Greenville, South Carolina. Our survey was conducted February 22, 2017 with supplementary sampling performed on March 2, 2017, in advance of the planned demolition of the structure and in general accordance with the terms of our Proposal No: P86177029 dated February 7, 2017. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation/demolition activities. NESHAP requires that asbestos-containing materials (ACM) be identified, classified and quantified prior to planned disturbances or demolition activities.

The asbestos survey was conducted by South Carolina Department of Health and Environmental Control (SC DHEC) licensed building inspectors. Building components were surveyed and homogeneous areas of suspect ACM were visually identified and documented, if present. Although reasonable effort was made to survey and locate accessible suspect materials, additional suspect but un-sampled materials could be located in walls, in voids or in other concealed areas.

2.0 BUILDING DESCRIPTION

Building 502 is approximately 9,500 square feet and is constructed of steel framing with a slab-on-grade foundation. The floors are predominantly finished with vinyl floor tile with some areas having carpeting. The walls were noted as being painted gypsum board, plaster, painted CMU, and painted brick. Two heating, ventilation, and air conditioning units were noted inside the building. The duct work appeared to be insulated with fiberglass wrap with no suspect tapes or mastics noted. Limited piping was noted and appeared to be insulated with fiberglass. The exterior was clad with a painted brick veneer. Suspect caulking and waterproofing were noted around the exterior of the building. The roof system was noted as being constructed of multi-ply, asphaltic materials.



3.0 ASBESTOS SURVEY

The asbestos survey was conducted by Messrs. Stephen N. Ellis and Thomas H. Tripp, SC DHEC licensed Asbestos Building Inspectors (License Nos. BI-01211 and BI-00841, respectively). Copies of their licenses are provided in Appendix D. The survey was conducted on February 22, 2017 with supplementary sampling performed on March 3, 2017. The survey was performed in general accordance with the sampling protocols established by EPA Regulation 40 CFR 763 (AHERA) and SC DHEC R61-86.1. A summary of survey activities is provided below.

3.1 Regulatory Overview

An ACM is defined as any material containing asbestos of any type in an amount greater than one percent (1%). The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non friable ACM includes packing materials, gaskets, resilient floor coverings and asphalt roofing products containing more than 1 percent (%) asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation/demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

In the state of South Carolina, asbestos activities are regulated by the SC DHEC under SC DHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. SC DHEC requires that asbestos-related activities conducted in a public building be performed by personnel licensed by SC DHEC. The owner or operator must provide the SC DHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. The SC DHEC requires a four (4) day notification for non-friable projects and 10 day notification for RACM projects. Asbestos abatement must be performed by SC DHEC-licensed asbestos abatement contractors. A SC DHEC-licensed Project Designer shall prepare a written abatement design for each abatement renovation project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SC DHEC asbestos regulations can be found at http://www.SC DHEC.gov.

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The Occupational Safety and Health Administration (OSHA) Asbestos Standard for Construction Industry (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities, which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. A full copy of the OSHA asbestos standard for general industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

3.2 Visual Assessment

Our survey activities began with visual observation of the interior and exterior of the structure to identify apparent homogeneous areas of suspect ACM. A homogeneous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. Building materials which were not identified as concrete, glass, wood, masonry, metal or rubber were considered suspect ACM.

Terracon lifted floor coverings in several areas, where possible, and did not observe additional flooring layers unless mentioned in this report; however, as Terracon could not assess beneath all floor covering in all areas, there may be isolated areas of additional suspect material present beneath existing flooring.

3.3 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material, which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.4 Sample Collection

Based on our visual observations, bulk samples of suspect ACM were collected in general accordance with sample collection protocols as required by SC DHEC Regulation 61.86.1. Random samples of suspect materials were collected in each homogeneous area. Bulk samples were collected using wet methods, as applicable, to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

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3.5 Sample Analysis

Bulk samples were submitted using chain-of-custody procedures to Scientific Analytical Institute, Inc. (SAI) of Greensboro, North Carolina. SAI is accredited under the National Voluntary Laboratory Accreditation Program NVLAP (#200664-0). Except for surfacing materials, the samples were submitted for a "positive stop" analysis which means that once asbestos is detected in a sample, the remainder of the samples in the same homogenous set are not analyzed and are presumed to be of similar asbestos content.

Asbestos analysis was performed by PLM with dispersion staining techniques per EPA EPA/600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopical visual estimation. Per the SC DHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects, negative results for non-friable organically bound (NOB) materials such as flooring, mastics, or roofing shall be verified with at least one TEM analysis. The additional analysis was performed by TEM in accordance with EPA Chatfield SOP 1988-02 Rev. 1.

3.6 Findings and Recommendations

A total of 109 bulk samples were collected from the structure. A general layout with sample locations is included as Figure 1 in Appendix A. Sample descriptions, locations, analytical results, classification and estimated quantities are summarized in Table 1 in Appendix B. Asbestos laboratory analytical reports are included in Appendix C and photographic documentation in Appendix E.

Asbestos was detected (greater than 1%) or assumed in samples of the following materials:

- Drywall joint compound (3% chrysotile) in the front office area;
- Gray caulking (3% chrysotile) on interior window/door system in the front office area;
- Black/white caulking (10% chrysotile) on perimeter window/door system in the front office area;
- Block wall filler (3.6% chrysotile) in the open middle area;
- Gray caulking (2% chrysotile) on interior window system in the rear area;
- Black roof mastic (3.0% chrysotile); and,
- Light fixture gasket (assumed to contain asbestos) in the front area HVAC closet.

Initially, five samples of drywall joint compound were collected from the front area. Based on the mixed results obtained from this sampling, Terracon collected seven addition samples from this area on March 3, 2017 in an effort to delineate the extent of the asbestos containing joint compound. After evaluation of the laboratory results in total, Terracon concluded that the entire gypsum wallboard system in the front area should be considered asbestos containing.

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Materials containing greater than 1% asbestos should be removed by an SC DHEC-licensed abatement contractor prior to beginning demolition activities. Based on the quantity and type of materials present an abatement work plan (i.e., project design) must be written for this work scope. Additionally, third party asbestos air monitoring must be performed during prior to, during, and at the conclusion of the abatement of the regulated materials.

A copy of this report must be submitted to SC DHEC at least ten (10) working days prior to demolition.

It should be noted that suspect materials, other than those identified during our survey may exist within the structure. Should suspect materials other than those which were identified during this survey be uncovered during or prior to the renovation process, those materials should be assumed to be asbestos-containing until sampling and analysis demonstrates otherwise.

Federal, state, and local regulations should be consulted before initiating any action on an ACM.

4.0 LEAD-BASED PAINT SURVEY

4.1 Regulatory Overview

As applicable to this project, lead is regulated by SC DHEC and OSHA. The SC DHEC regulates disposal and OSHA regulates lead exposure to workers. The SC DHEC regulations define lead-based paint (LBP) as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 0.7 milligrams per square centimeter (mg/cm²), or 0.06% by dry weight as determined by laboratory analysis. The SC DHEC regulations require that LBP-coated demolition debris be disposed in a permitted Class II landfill. However, coatings that are de-laminated, deteriorated, or flaking must be evaluated against the Toxicity Characteristic under state and federal hazardous waste management regulations. Lead-based paint is defined in SC Regulation 61-107.9, "Solid Waste Landfills and Structural Fill." The hazardous waste Toxicity Characteristic is defined in the SC Hazardous Waste Management Regulation 61-79, at § 261.24, "Toxicity Characteristic."

For the purpose of the OSHA lead standard, lead includes metallic lead, inorganic lead compounds, and organic lead soaps. A synopsis of the OSHA regulations (29 CFR 1926.62) and the applicability are described below.

The OSHA Lead Standard for Construction (29 CFR 1926.62) applies to construction work where an employee may be occupationally exposed to lead. Work related to construction, alteration, or repair (including painting and decorating) is included. The lead-in-construction standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Under this standard, construction includes, but is not limited to, the following:

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- Demolition or salvage of structures where lead or materials containing lead are present;
- Removal or encapsulation of materials containing lead;
- New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead;
- Installation of products containing lead;
- Lead contamination/emergency clean-up;
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and,
- Maintenance operations associated with construction activities described above.

4.2 Sampling and Analytical Protocol

4.2.1 Analysis via XRF

An RMD LPA-1 XRF instrument was used to assess if a surface coating contained LBP for disposal purposes. The LPA-1 XRF is a handheld, field portable, energy dispersive spectrometer that is self-contained and battery powered. The LPA-1 implements the X-ray fluorescent technique using a sealed radioactive source (Cobalt-57) inside the instrument to excite atoms in the sample to produce fluorescent X-rays. When gamma-rays spontaneously emitted by the Cobalt-57 source strike the painted surface, lead atoms in the paint are "excited" and respond by emitting their own characteristic X-rays of unique energies. This response is known as fluorescence. X-ray measurements are made directly on the painted surface of component (unpainted components may also be tested for lead content). The instrument, which has been pre-calibrated by the manufacturer, is held against the surface to be analyzed. The X-ray detector unit, along with its associated microcomputer, is activated. After an instrument-selected analysis time, the concentration of lead on the surface and in the paint film is read directly from the instrument's display in units of mg/cm².

The LPA-1 XRF (Serial Number 1601) instrument was operated in the "Quick" Mode for this project. According to EPA guidelines, a lead measurement requires that a reading be taken with a 95% confidence level. This means that the actual measured lead value must exceed the regulatory action level by at least twice the uncertainty value to be considered valid. Uncertainty is not a constant value; it depends on time, measurement, substrate, and the actual lead concentration. The LPA-1 XRF in Quick Mode automatically incorporates all of these factors to yield 95% confidence readings. Calibration checks were performed prior to and after analyses and were documented to be within the manufacturer's specifications.

4.2.2 Analysis via Paint Chip Sampling

The LBP sampling was conducted by collecting random paint chip samples to supplement findings of XRF analysis and to assist the demolition/abatement contractor with determining potential engineering controls or other means to insure OSHA compliance during demolition efforts.

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The paint samples were collected down to the surface substrate so as to include any underlying paint in the analysis. The random paint chip samples were selected based on current paint schemes and may not be inclusive of old paint systems covered with paneling, or existing painted systems. The paint chip samples were submitted to an American Industrial Hygiene Association Laboratory Approval Program (AIHA LAP) accredited laboratory (SAI) for analysis of lead by flame atomic absorption spectroscopy EPA Method No. SW-846 3050B/6010C/7420.

4.3 Findings and Recommendations

Analysis by XRF

One hundred three (103) areas of painted components within the structure were analyzed by XRF and the results are summarized in Table 2 in Appendix B. Several materials had detectable amounts of lead-containing paints with five of the coatings containing lead at concentrations equal to or exceeding 0.7 mg/cm². Paints exceeding 0.7 mg/cm² are summarized below.

- Crème paint on a mop sink in the front office area;
- Black paint on an interior door frame in the rear area;
- Black paint on an interior door frame in the mechanical room;
- Tan paint on a brick wall on the exterior of the building; and,
- Tan paint on a window sill on the exterior of the building.

Negative or zero (0) XRF results are reported in Table 1 as <0.1 mg/cm² which is the lowest level of detection for the instrument. The EPA recognizes the statistical nature of the analytical measurements and the possibility of obtaining negative values where the lead content is around zero. In practice, the interpretation of a negative number has been as a reading that is below the regulatory Action Level threshold (0.7 mg/cm² for disposal purposes, as applicable to this project) and, as a result, the coating is not considered to be LBP.

Analysis by Paint Chip Sampling

Four (4) paint-chip samples were collected from various components within the structure and submitted for laboratory analysis. Three of the four samples contained detectable amounts of lead. Lead was detected at concentrations exceeding the 0.06% by weight regulatory threshold in two of the samples. Table 3 in Appendix B provides a summary of the results. A copy of the laboratory data report and chain-of-custody form is included in Appendix C.

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Discussion and Recommendations

Regulatory agencies, such as the US EPA, SC DHEC, and the Consumer Products Safety Commission (CPSC) have designated levels of lead in paint, below which they consider the paint to be non-lead containing. The missions of these agencies differ from OSHA's, and for that reason, OSHA cannot recognize these levels as safe under workplace situations. The OSHA lead-in-construction standard was intended to apply to detectable concentrations of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon the method of removal and other workplace conditions.

OSHA does not consider methods that rely solely on the analysis of bulk materials or surface content of lead (or other toxic material) to be acceptable for safely predicting employee exposure to airborne contaminants. Without air monitoring results or without the benefit of historical or objective data (including air sampling which clearly demonstrates that the employee cannot be exposed above the action level during any process, operation, or activity) the analysis of bulk or surface samples cannot be used to determine employee airborne exposure. Building materials, equipment, and components identified in this report as being coated with lead-containing paint/primer should be properly evaluated to determine if the paint system should be abated by qualified and properly equipped personnel under the OSHA Lead Construction Standard, found at 29 CFR 1926.62. A full copy of the OSHA lead standard for construction industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

The paint systems observed in Building 502 were generally observed to be intact. However, the condition of the paint systems at the time of the demolition, as well as the demolition activities/methods intended will dictate the proper course of action, in terms of whether lead abatement is necessary. It is not required to fully abate the lead paint from the substrate for disposal or recycling efforts; however, any deteriorated paint and disturbance of paint must be addressed in accordance with 29 CFR 1926.62 and disposed of properly. If the lead-containing coatings identified herein will be abated, Terracon recommends that the resulting waste be evaluated against the Toxicity Characteristic under state hazardous waste management regulations found at SC R. 61-79.261.24.

Based upon the above results, the paint systems in and on the structure should be considered lead-containing for the purpose of OSHA compliance. Further, components coated with lead based paint can, by regulation, be disposed of at a Class II (i.e., C&D) landfill. However, the prospective disposal facility should be contacted for its approval prior to shipment of the waste from the site.

ACM and LBP Survey Report
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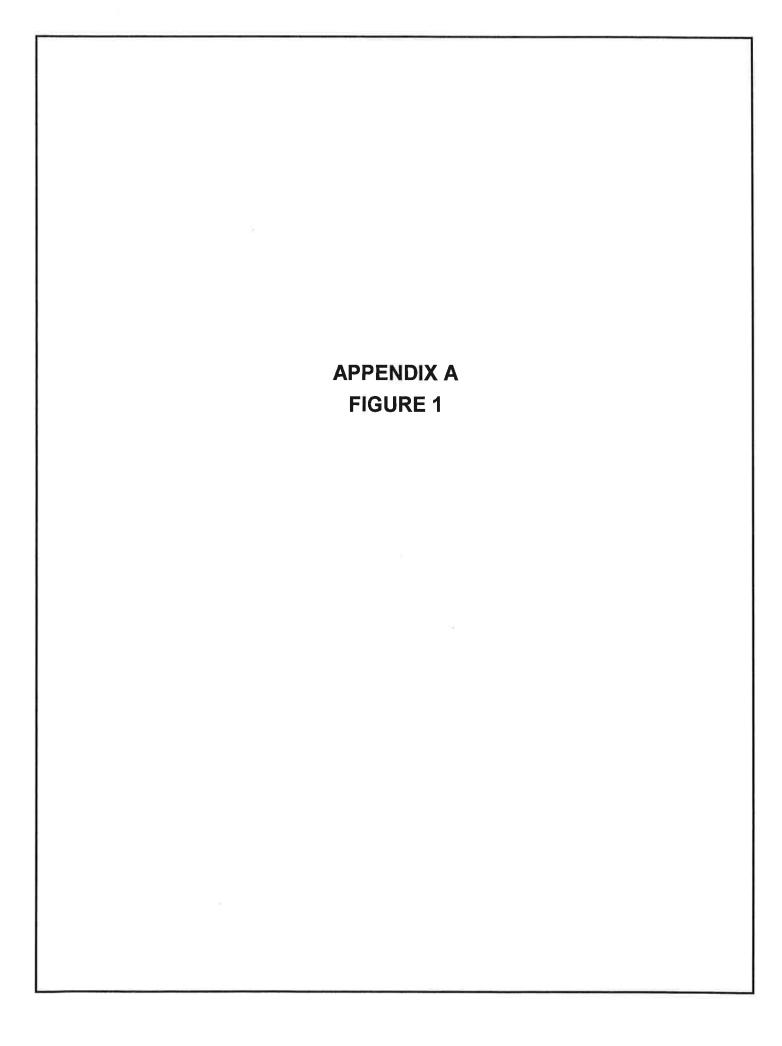


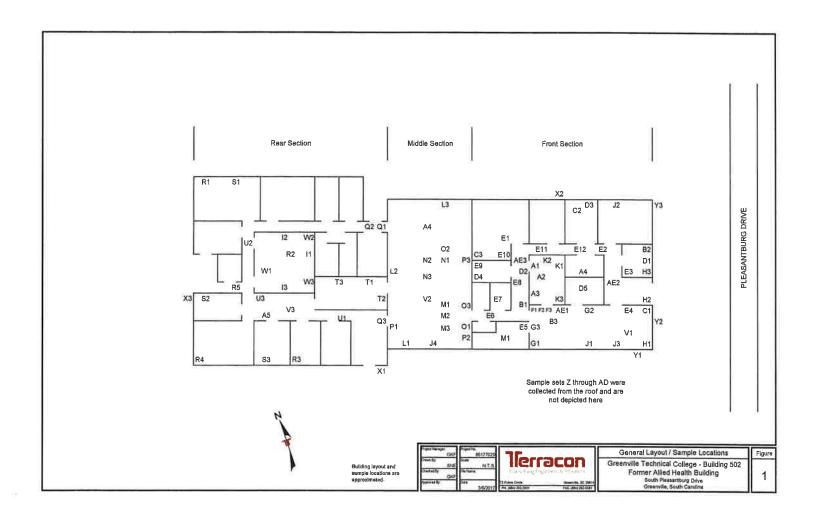
5.0 GENERAL COMMENTS

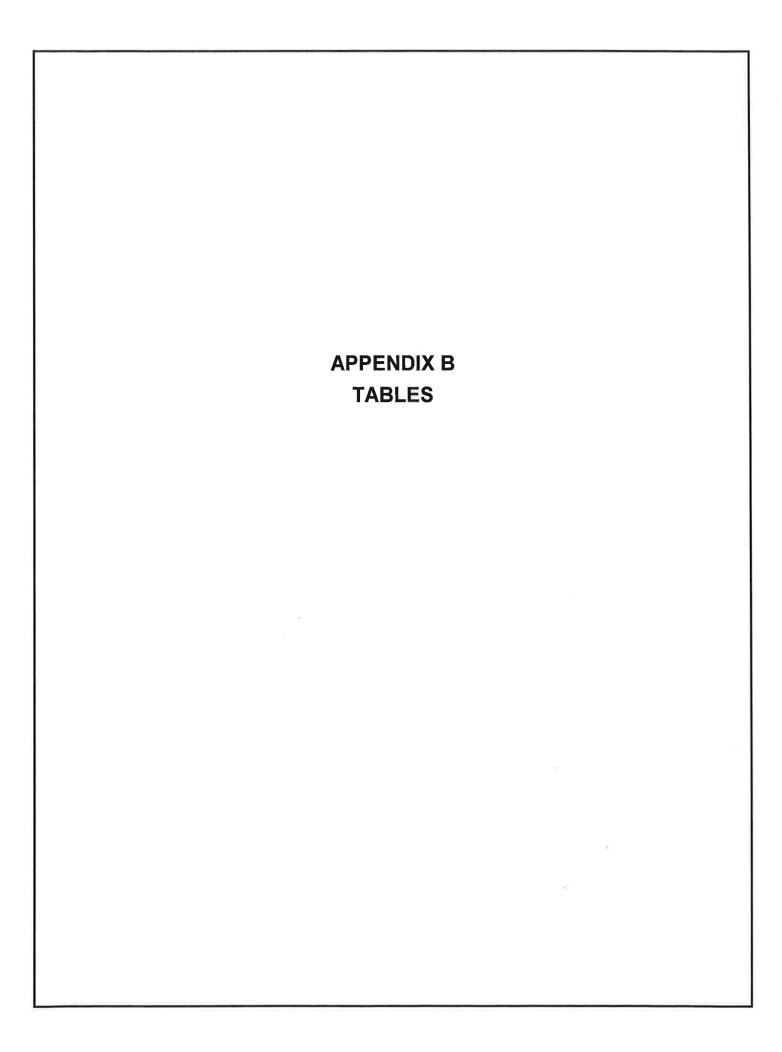
This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same geographic locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date.

This report has been prepared on behalf of and exclusively for use by Greenville Technical College for specific application to their project, as discussed herein. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, express or implied is made.

This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary.







GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA TERRACON PROJECT NO. 86177029

| Sample Number | Analysis Method | Analytical Results | Sample Location | Sample Description | Hornogeneous Area | Classification | Friable / Non-Friable | Current Condition | Polential for Disturbance | Estimated Quantity |
|------------------|--------------------|---|---|--|----------------------|-----------------|--------------------------|----------------------|------------------------------|-----------------------|
| A1 | PLM | | | | | | | | | |
| A2 | PLM | | Throughout Building | 12" White Floor with Mulit- Colored Streaks and Yellow | | | | | 1 1 | 6,000 SF |
| A3 | TEM | Tile - NAD Mastic - NAD | | | A | Miscellaneous | Non-Friable | Good | LPD | |
| A4 | PLM | 111111111111111111111111111111111111111 | | Mastic | | | | | | |
| A5 [†] | PLM | | | | | | | | | |
| B1 | PLM | | | | | | | | | |
| B2 | PLM | NAD | Throughout Building | Cove Base Mastic | В | Miscellaneous | Non-Friable | Good | LPD | 265 SF |
| В3 | TEM | | | | | | | | | |
| C1 | PLM | | G 288 | | | | | | | |
| C2 | PLM | NAD | Front Office Area in Limited Locations | Yellow Carpet Mastic | С | Miscellaneous | Non-Friable | Good | LPD | 3,500 SF |
| C3 | TEM | | 2002110110 | | | | | | 1 1 | |
| D1 | PLM | | | 7.7-7 | | | | | | |
| D2 | PLM | | | Plaster | | 0. | | - S | 1 1 | |
| D3 | PLM | Finish Coat - NAD Base Coat - NAD | Front Office Area Perimeter Walls and Vault Walls | | D | Surfacing | Friable | Good | LPD | 2,880 SF |
| D4 | PLM | 200 0001 1010 | | | | | | | | |
| D5 | PLM | | | | | | | | | |
| E1 | PLM | | | TELESCE STORY | Name of Street | AIR CO. CO. | W 197 | | 19 - 1 | No. |
| E2 | PLM | | | Contract of the same | No or and | | Water Bar | | S- COATS | |
| E3 | PLM | | | | | RIANGE S | | | | |
| E4 | PLM | | | | | | | | | |
| £5 | PLM | | | | | N. Committee | | | | |
| E6 | PLM | Drywall - NAD Joint Compound - 3% | | Barrelland Inter Comment | AND THE STREET | Miscellaneous / | | | | 2 4 13 1 |
| E7 | PLM | Chrysotile | Front Office Area | Drywall and Joint Compound | E | Surfacing | Friable | Good | LPD | 2,300 SF |
| E8 | PLM | | Water Control of the | STATE OF TAXABLE | | | | | 0.00 | |
| E9 | PLM | | Sent Sent Sent Sent Sent Sent Sent Sent | | | A Distant | V. En | 0) | | |
| E10 | PLM | | | | | | | | | |
| E11 | PLM | | | | G 655 | | 153460 | | 1 | |
| E12 | PLM | | | The state of the s | | 0 | Carried Co. | | - | |
| F1 | PLM | | | | | | | | | |
| F2 | PLM | NAD | Vault | Vauit Door Insulation | F | Miscellaneous | Friable | Good | LPD | 25 SF |
| F3 | PLM | Agair | | | | | | 11,000 | | 25 01 |

GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA TERRACON PROJECT NO. 86177029

| Sample Number | Analysis Method | Analytical Results | Sample Location | Sample Description | Homogeneous Area | Classification | Friable : Non-Friable | Current Condition | Potential for Disturbance | Estimated Quantity |
|------------------|--------------------|--------------------|---|---|---------------------|----------------------------|--------------------------|----------------------|------------------------------|-----------------------|
| G1 | PLM | | A RESERVE WELL | | Sub-E-C | | Catanan II | 300 | NEW W | No. of London |
| G2 | NA | 3% Chrysotile | Front Office Area Interior Window/Door Systems | | Miscellaneous | Category II Non-Friable | Good | LPD | 10 SF | |
| G3 | NA | | | | | | DAUSTON | | | |
| H1 | PLM | | Front Office Area | Black/White Caulking on Doors | Sal face | | Category (I | | | 100 |
| H2 | NA | 10% Chrysotile | Perimeter Window/Door | and Windows | н | Miscellaneous | Non-Friable | Good | LPD | 30 SF |
| H3 | NA | | Systems | | | | | Reported. | | W W BY |
| 11 | PLM | | | | | | | | | |
| 12 | PLM | NAD | Rear Lab Area | FRP Board Mastic | 31. | Miscellaneous | Non-Friable | Good | LPD | 400 SF |
| 13 | TEM | | | | | | | | | |
| J1 | PLM | | | | | | | | | |
| J2 | PLM | NAD | | Fireproofing on Perlmeter | J | Surfacing | Friable | Good | LPD | 575 SF |
| J3 | PLM | | | Structural Steel Ledger | | Guildeling | Triabio | 5000 | | 0,0 0, |
| J4 | PLM | | | | | | | | | |
| K1 | PLM | | - 105 | | | | | | | |
| K2 | PLM | NAD | Front Office Area Vault Walls | Block Wall Filler | К | Miscellaneous | Friable | Good | LPD | 720 SF |
| КЗ | TEM | | Vada Trans | | | | | | | |
| L1 | PLM | | TO MENTE TO MENTE | THE STATE OF STATE OF | 8 6 7 8 | | | | | |
| L2 | PLM | 3.6% Chrysotile | Open Middle Section | Block Wall Filler | L | Miscellaneous | Friable | Good | LPD | 1,650 SF |
| L3 | TEM | | | | | | | Sinsafe I | | ALC: NO |
| M1 | PLM | | | | | | | | | |
| M2 | PLM | NAD | Open Middle Section | Soft White Caulking on Undersink Mounts | М | Miscellaneous | Non-Friable | Good | LPD | <1 SF |
| M3 | TEM | | | | | | | | 1 | |
| N1 | PLM | | | | | | | | | |
| N2 | PLM | NAD | Open Middle Section | White Sink Undercoating | N | Miscellaneous | Non-Friable | Good | LPD | 10 SF |
| N3 | TEM | 17- | | | | | | | | |
| 01 | PLM | | | Bally Marily Coulling | | | | | | |
| O2 | PLM | NAD | Open Middle Section | Brittle While Caulking on Undersink Mounts | 0 | Miscellaneous | Friable | Damaged | PSD | <1 SF |
| О3 | TEM | | | | | | | | | _ |
| P1 | PLM | | | | | | | | | |
| P2 | PLM | NAD | Open Middle Section | Light Brown Cove Base Maslic | P | Miscellaneous | Non-Friable | Good | LPD | 55 SF |
| P3 | TEM | | | | | | | | | |

GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA TERRAGON PROJECT NO. 86177029

| Sample Number | Analysis Method | Analytical Results | Sample Location | Sample Description | Homogeneous Area | Classification | Friable / Non-Friable | Current Condition | Potential for Disturbance | Estimated Quantity |
|------------------|--------------------|--|---------------------------------|--|---------------------|------------------------------|----------------------------|----------------------|--|-----------------------|
| Q1 | PLM | | B | | | | | | | |
| Q2 | PLM | NAD | Rear Area Limited Locations | Gray Floor Leveler | Q | Miscellaneous | Non-Friable | Good | LPD | 10 SF |
| Q3 | TEM | | | | | | | | | |
| R1 | PLM | | | | | | | | | |
| R2 | PLM | | | 1 | | | | | | |
| R3 | PLM | Drywall - NAD Joint Compound - NAD | Rear Area | Drywall and Joint Compound | R | Miscellaneous / Surfacing | Friable | Limited Damage | LPO | 3,500 SF |
| R4 | PLM | come compound - NAB | | | | dilacing | | | | |
| R5 | PLM | | | | | | | | | |
| S1 | PLM | 5 S S S S S S S S S S S S S S S S S S S | 12 A T 12 A T 15 A T | | | THE SECOND | No. | No. 3 and | The state of the s | |
| \$2 | NA | 2% Chrysotile | Rear Area | Gray Interior Window Caulking | S | Miscellaneous | Category II Non-Friable | Good | LPD | 30 9F |
| 83 | NA | A CONTRACTOR OF THE PARTY OF TH | | | The sale | | MOINTIME | | | A. Tari |
| T1 | PLM | | | | | | | | | |
| T2 | PLM | NAD | Rear Area Elevated Work Room | Brown Maslic on Brick Wall | Т | Miscellaneous | Non-Friable | Good | LPD | 560 SF |
| T3 | TEM | | Elevated Mork Koolii | | | | | | | |
| U1 | PLM | | | | | | | | | |
| U2 | PLM | NAD | Rear Area Limited Locations | Beige Cove Base Mastic | U | Miscellaneous | Non-Friable | Good | LPD | 850 SF |
| U3 | TEM | | Lifficed Cocations | | | | | | | |
| V1 | PLM | | | | | | | | | |
| V2 | PLM | NAD | Throughout Building | Ceiling Tile, 2' X 4' | V | Miscellaneous | Friable | Good | LPD | 9,000 SF |
| V3 | PLM | | | | | | | | | |
| W1 | PLM | | | | | | | | | |
| W2 | PLM | NAD | Throughout Building Mixed In | Ceiling Tile, 2' X 2' | w | Miscellaneous | Friable | Good | LPD | 150 SF |
| W3 | PLM | | Wilked III | | | | | | | |
| X1 | PLM | | | | | | | | | |
| X2 | PLM | NAD | Exterior | Exterior Caulking on Expansion Joints, Windows, and Doors | × | Miscellaneous | Non-Friable | Good | LPD | 100 SF |
| X3 | TEM | | | Jourts, Williams, and Doors | | | | | | |
| Y1 | PLM | | | | | | | | | |
| Y2 | PLM | NAD | Exterior | Exterior Waterproofing | Y | Miscellaneous | Non-Friable | Good | LPD | 920 SF |
| Y3 | TEM | | | | | | | | | |
| Z1 | PLM | | | | | | | | | |
| Z2 | PLM | Roofing - NAD‡ | Roof | Built-Up Roofing | z | Miscellaneous | Non-Friable | Good | LPD | 9,500 SF |
| Z3 | TEM | | | | | | | | | .,,,,, |

GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA TERRACON PROJECT NO. 86177029

| Sample Number | Analysis Method | Analytical Results | Sample Location | Sample Description | Homogeneous Area | Classification | Friable / Non-Friable | Current Condition | Polential for Disturbance | Estimated Quantity |
|------------------|--------------------|--------------------|----------------------------------|---|---------------------|---|---------------------------|----------------------|------------------------------|-----------------------|
| AA1 | PLM | | | | | | | | | |
| AA2 | PLM | NAD | Roof | Edge Flashing | AA | Miscellaneous | Non-Friable | Good | LPD | 930 SF |
| AA3 | TEM | | | | | | | | | |
| AB1 | PLM | | | | BING THAT | 100000000000000000000000000000000000000 | USALE | | | |
| AB2 | PLM | 3.0% Chrysotile | Roof | Roof Mastic | AB | Miscellaneous | Category I Non-Friable | Good | LPD | 7 SF |
| AB3 | TEM | | | | | | 2000 | | | |
| AC1 | PLM | | | | | | | | | |
| AC2 | PLM | NAD | Roof | Penetration Flashing | AC | Miscellaneous | Non-Friable | Good | LPD | 45 SF |
| AC3 | TEM | | | | | E1 | | | | |
| AD1 | PLM | | | | | | | | | |
| AD2 | PLM | NAD . | Roof | Silver Roof Sealant | AD | Miscellaneous | Non-Friable | Good | LPD | 5 SF |
| AD3 | TEM | | | | | | | | | |
| AE1 | PLM | | | - 145 H | | | | | | |
| AE2 | PLM | NAD | Front Office Area Vault Walls | Paint/Plaster over Canvas Wall Paper | AE | Miscellaneous | Non-Friable | Good | LPD | 850 SF |
| AE3 | TEM | | | | | | | | | |
| N/A | N/A | Assumed | Front Office Area HVAC Closet | Light Fixture Gasket | AF | Miscellaneous | Catagory I Non-Friable | Good | LPD | 1 NI |

1) Quantities listed above are estimates to be used for inspection purposes only and should be field-verified for all other uses.
2) Approximate sampling locations are depicted on Figure 1.

† - Leveling compound reported in sample A5 is the same as reported in samples Q1-Q3.

‡ - Samples Z2 and Z3 were also reported to contain non-suspect foam insulation. Additionally, sample Z3 was reported to a "felt on foam" layer that was analyzed by TEM. This material was, in fact, non-suspect paper backing.

NA - Not Analyzed
NAD - No Asbestos Detected
PLM - Polarfized Light Microscopy
TEM - Transmission Electron Microscopy
PACM - Presumed Asbestos Containing Material

LPD - Low potential for disturbance PD - Potential for disturbance PSD - Potential of significant disturbance

SF - square feet LF - linear feet CF - cubic feet

TABLE 2 LEAD IN PAINT SUMMARY (XRF)

GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA TERRACON PROJECT NO. 86177029

| Test | | | | | | | Lead |
|----------|-------------------|----------------|--------------------|-----------------------|-------------|----------------|---------------|
| Number | Area | Direction | Substrate | Component | Feature | Color | Concentration |
| Number | | | | | | | (mg/cm²) |
| 1 | | | | | | | 1.0 |
| 2 | Calibration | | | | | | 0.8 |
| 3 | | | | | | | 1.0 |
| 4 | | South | Plaster | Wall | | White | <0.1 |
| 5 6 | | South | Metal | Structural Steel | Column | White | <0.1 |
| 7 | | South North | Plaster | Wall Wall | | White | <0.1 |
| 8 | | North | Drywall Metal | Door | Frame | White Black | <0.1 |
| 9 | | North | Metal | Door | Fiame | Black | <0.1 |
| 10 | | 110141 | Metal | Door | Vault | Black | 0.2 |
| 11 | | | Metal | Door | Vault Frame | Black | <0.1 |
| 12 | | East | Block | Wall | | White | <0.1 |
| 13 | | North | Block | Wall | | White | <0.1 |
| 14 | | West | Block | Wall | | White | <0.1 |
| 15 | | North | Drywall | Wall | | White | <0.1 |
| 16 | | | Metal | Door | Frame | Black | 0.2 |
| 17 | | | Metal | Door | | Black | 0.1 |
| 18 | | East | Plaster | Wall | | Blue | <0.1 |
| 19 | Front Office Area | West | Drywall | Wall | | Blue | <0.1 |
| 20 | Tront omoor nod | | Wood | Door | | Black | 0.2 |
| 21 | | | Drywall | Wall | | White | 0.2 |
| 22 | | | Plaster | Wali | | White | <0.1 |
| 23 | | | Wood | Door | | Black | <0.1 |
| 24 | | | Metal | Door | Frame | Black | 0.2 |
| 25 26 | | | Drywall | Wall | 0.1 | Red | <0.1 |
| 27 | | _ | Metal | Structural Steel Wall | Column | White | <0.1 |
| 28 | | | Drywall Plaster | Wall | | White White | <0.1 |
| 29 | | | Metal | Door | Frame | Black | <0.1 0.4 |
| 30 | | | Wood | Door | Traille | Black | <0.1 |
| 31 | | | Plaster | Wall | | White | <0.1 |
| 32 | | | Metal | Structural Steel | Column | White | <0.1 |
| 33 | | | Plaster | Wall | | White | <0.1 |
| 34 | | | Drywail | Wall | | White | <0.1 |
| 35 | | | Wood | Door | Frame | Black | <0.1 |
| 36 | | | | | | | 1.0 |
| 37 | Calibration₹₹ | | | | | | 0,8 |
| 38 | | | | | | | 1.0 |
| 39 | | | Wood | Door | Frame | Black | <0.1 |
| 40 | | | Metal | Sink | Mop | Crème | 2.6 |
| 41 | Front Office Area | | Wood | Door | | Black | <0.1 |
| 42 | | | Ceramic | Wall | | Gray | <0.1 |
| 43 | | | Ceramic | Floor | | Gray | <0.1 |
| 44 | | ļ | Ceramic | Floor | | Gray | <0.1 |
| 45 | | | Brick | Wall | | White | 0.3 |
| 46 | | | Metal | Structural Steel | Column | White | <0.1 |
| 47 48 | | | Metal | Structural Steel | Column | Black | <0.1 |
| 49 | | | Block Block | Wall Wall | | White White | <0.1 |
| 50 | Middle Open Area | | Metal | Door | Frame | Black | <0.1 |
| 51 | | | Block | Wall | riante | White | <0.1 |
| 52 | | | Block | Wall | | White | <0.1 |
| 53 | | | Brick | Wall | | White | 0.1 |
| 54 | | | Metal | Door | Frame | Black | 0.1 |
| 55 | | | Wood | Door | Trante | Finish | <0.1 |
| 56 | | | Metal | Door | | Black | 0.2 |
| 57 | Rear Space | | Drywall | Wall | | White | <0.1 |
| 58 | | | Block | Wall | | White | <0.1 |

TABLE 2 LEAD IN PAINT SUMMARY (XRF)

GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE GREENVILLE, SOUTH CAROLINA TERRACON PROJECT NO. 86177029

| Test Number | Area | Direction | Substrate | Component | Feature | Color | Lead Concentration (mg/cm²) |
|----------------|-----------------|----------------|-----------|------------------|------------|----------------|-----------------------------------|
| 59 | | | Metal | Door | Frame | Black | 1.1 |
| 60 | | | Wood | Door | | Finish | <0.1 |
| 61 | | | Drywall | Wali | | Tan | 0.1 |
| 62 | | | Ceramic | Wall | | White | <0.1 |
| 63 | | | Ceramic | Floor | | Gray | <0.1 |
| 64 | Rear Space | | Ceramic | Baseboard | | Gray | <0.1 |
| 65 | · | | Drywall | Wall | | White | <0.1 |
| 66 | | | Metal | Door | Frame | Black | 0.2 |
| 67 | | | Drywall | Wall | | White | <0.1 |
| 68 | | | Wood | Wall | Trim | White | <0.1 |
| 69 | | | Metal | | Heater Box | Black | 0.3 |
| 70 | | Carrier St. | Metal | Door | Frame | Black | 1.1 |
| 71 | Mechanical Room | | Metal | Door | Tune | Black | <0.1 |
| 72 | | | Drywall | Wall | | Tan | <0.1 |
| 73 | i i | | Drywall | Wall | | Tan | <0.1 |
| 74 | Lab | | Drywall | Wall | | Tan | 0.1 |
| 75 | Lab | | Drywall | Wall | | Green | <0.1 |
| 76 | | | Metal | Door | Frame | Black | 0.4 |
| 77 | | | Metal | Structural Steel | | | |
| 78 | | | Metal | Structural Steel | Column | Black Black | <0.1 |
| 79 | | | Drywall | Wall | Column | | <0.1 |
| 80 | Rear Space | | Wood | Door | | Tan Finish | <0.1 |
| 81 | | | Plaster | Wall | | Tan | <0.1 |
| 82 | | | Drywall | Wall | | Tan | <0.1 |
| 83 | | South | Brick | Wall | | Tan | <0.1 |
| 84 | | South | Metal | Structural Steel | | | <0.1 |
| 85 | | South | Metal | Pipe | Bollard | Tan | <0.1 |
| 86 | | South | Metal | Structural Steel | Column | Gray Tan | <0.1 |
| 87 | | South | Metal | Window | Frame | Black | <0.1 <0.1 |
| 88 | | South | Brick | Wall | Traitie | Tan | 1.1 |
| 89 | | South | Metal | Structural Steel | | Tan | |
| 90 | | | | | O.III | | 0.4 |
| 91 | | South South | Metal | Window | Sill | Tan | 3.2 |
| | | | Metal | Structural Steel | Column | Tan | <0.1 |
| 92 | | South | Metal | Structural Steel | | Tan | 0.3 |
| 93 | | South | Brick | Wall | | Tan | 0.4 |
| 94 | | East | Metal | Window | Sill | Tan | <0.1 |
| 95 | Exterior | East | Metal | Structural Steel | | Tan | <0.1 |
| 96 | Exterior | East | Brick | Wall | 0.1 | Tan | 0.5 |
| 97 | | North | Metal | Structural Steel | Column | Tan | <0.1 |
| 98 | | North | Metal | Window | Sill | Tan | <0.1 |
| 99 | | North | Brick | Wall | | Tan | 0.1 |
| 100 | | North | Metal | Structural Steel | Column | Red | <0.1 |
| 101 | | North | Brick | Wall | | Tan | <0.1 |
| 102 | | North | Brick | Wall | 0.1 | Tan | <0.1 |
| 103 | | North | Metal | Structural Steel | Column | Tan | <0.1 |
| 104 | | North | Brick | Wall | | Tan | <0.1 |
| 105 | | West | Brick | Wall | | Tan | 0.3 |
| 106 | | West | Metal | Structural Steel | | Tan | <0.1 |
| 107 | | West | Brick | Wall | | Tan | <0.1 |
| 108 | | South | Brick | Wall | | Tan | <0.1 |
| 109 | | South | Metal | Structural Steel | Column | Tan | <0.1 |
| 110 | | | | | | | 0.9 |
| 111 | Calibration | | | | | | 1.0 |
| 112 | | | | | | | 1.0 |

Note: Negative or zero (0) XRF results are reported in Table 1 as <0.1 mg/cm² which is the lowest level of detection for this instrument.

₹₹: Due to a low battery the XRF required a battery change, thus a single calibration group.

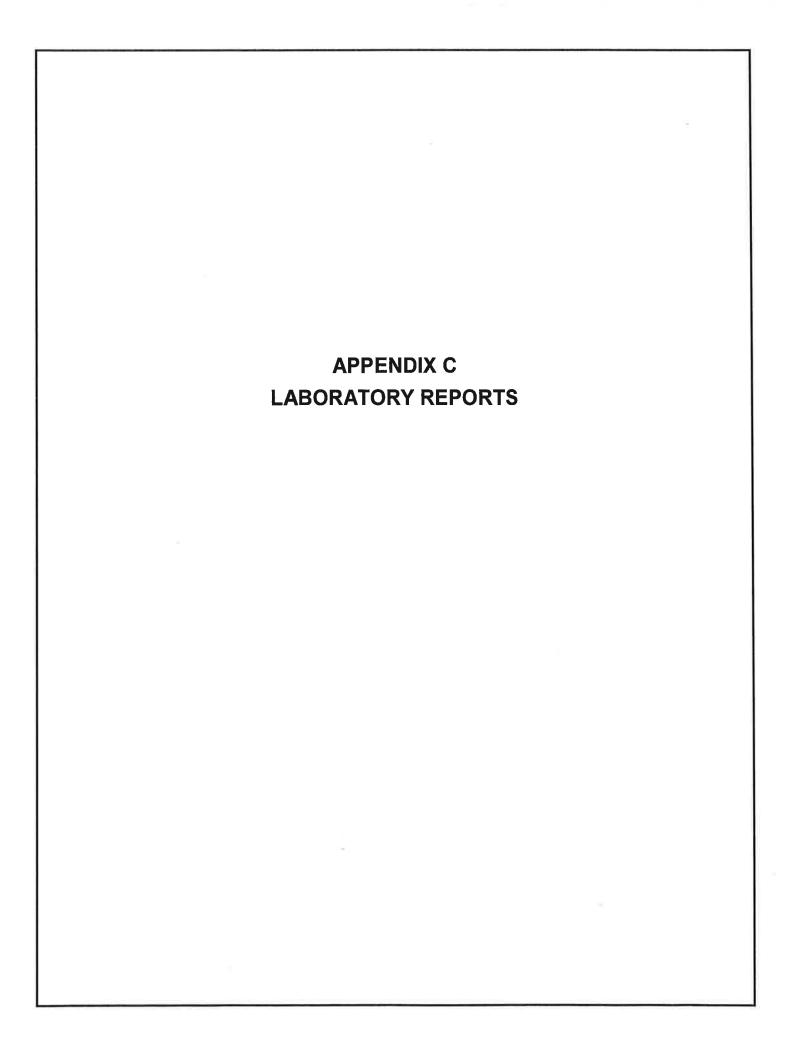
TABLE 3 LEAD IN PAINT SAMPLE SUMMARY (PAINT CHIP)

GREENVILLE TECHNICAL COLLEGE - BUILDING 502 SOUTH PLEASANTBURG DRIVE **GREENVILLE, SOUTH CAROLINA TERRACON PROJECT NO. 86177029**

| Sample ID No. | Area | Substrate | Component | Color | Lead Concentration (%) |
|------------------|--------------------------------|-----------|-------------------------|-------|------------------------------|
| PC-1 | Middle Open Area - North Wall | Block | Wall | White | <0.005 |
| PC-2 | Front Office Area - North Wall | Metal | Structural Steel Column | White | 0.010 |
| PC-3 | Exterior - South Wall | Metal | Structural Steel Column | Tan | 0.14 |
| PC-4 | Exterior - North Wall | Metal | Structural Steel Column | Tan | 0.20 |

Notes:

- Values above the analytical method detection limit are indicated in bold type
 Values equal to or greater than 0.060 percent are bolded and shaded





By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis

George Flores

Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017

Date Reported: 3/1/2017

Project:

GTC Building 502

| Sample ID | Description | Anhantan | Fibrous | Non-Fibrous | Attributes |
|----------------|---|---------------|------------|-------------|--------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| A1 - A | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_1 | tile | | | | Dissolved |
| A1 - B | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_99 | mastic | | | | Dissolved |
| A2 - A | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_2 | tile | | | | Dissolved |
| A2 - B | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_100 | mastic | | | | Dissolved |
| A3 - A | 12" White Floor Tile and Yellow Mastic | Not Analyzed | | | |
| 1703968PLM_3 | tile - TEM | | | | |
| A3 - B | 12" White Floor Tile and Yellow Mastic | Not Analyzed | | | |
| 1703968PLM_101 | mastic - TEM | | | | |
| A4 - A | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_4 | tile | | | | Dissolved |
| A4 - B | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_I02 | mastic | | | | Dissolved |

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Bethany Nichols (127)

P.F-002 r15 1/15/2018 Analyst Approved Signatory



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores

Lab Order ID: 1703968

Analysis ID: 1703968 PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | A 1 | Fibrous | Non-Fibrous | Attributes |
|----------------|---|---------------|------------|-------------|--|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| A5 - A | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_5 | tile | | | | Dissolved |
| A5 - B | 12" White Floor Tile and Yellow Mastic | None Detected | | 100% Other | Yellow, Gray Non Fibrous Heterogeneous |
| 1703968PLM_103 | mastic/leveling | | | | Crushed, Dissolved |
| B1 - A | Mixed Cove Base Mastics | None Detected | | 100% Other | Brown Non Fibrous Homogeneous |
| 1703968PLM_6 | mastic | | | | Dissolved |
| B1 - B | Mixed Cove Base Mastics | None Detected | | 100% Other | White Non Fibrous Heterogeneous |
| 1703968PLM_104 | compound/plaster | | | | Crushed |
| B2 - A | Mixed Cove Base Mastics | None Detected | | 100% Other | Brown Non Fibrous Homogeneous |
| 1703968PLM_7 | mastic | | | | Dissolved |
| B2 - B | Mixed Cove Base Mastics | None Detected | | 100% Other | White Non Fibrous Heterogeneous |
| 1703968PLM_105 | compound/plaster | | | | Crushed |
| В3 | Mixed Cove Base Mastics | Not Analyzed | | | |
| 1703968PLM_8 | mixed mastics - TEM | · | | | |
| C1 | Yellow Carpet Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_9 | | | | | Dissolved |

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By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle

Attn: Stephen Ellis George Flores Lab Order ID: 1703968 Analysis ID:

1703968_PLM

Greenville, SC 29615

Date Received: 2/27/2017

Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | Aghagtag | Fibrous | Non-Fibrous | Attributes |
|----------------|----------------------|---------------|------------|-------------------------|---|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| C2 | Yellow Carpet Mastic | None Detected | | 100% Other | Yellow, Brown Non Fibrous Heterogeneous |
| 1703968PLM_10 | mixed mastics | | | | Dissolved |
| C3 | Yellow Carpet Mastic | Not Analyzed | | | V |
| 1703968PLM_11 | TEM | | (4) | | |
| D1 - A | Plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_12 | compound | | | | Crushed |
| D1 - B | Plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_106 | finish | | | | Crushed |
| D1 - C | Plaster | None Detected | | 80% Other 20% Quartz | Gray Non Fibrous Homogeneous |
| 1703968PLM_107 | base | | | | Crushed |
| D2 - A | Plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_13 | finish | | | | Crushed |
| D2 - B | Plaster | None Detected | | 80% Other 20% Quartz | Gray Non Fibrous Homogeneous |
| 1703968PLM_108 | base | | | _575 &23332 | Crushed |
| D3 - A | Plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_14 | finish | | | | Crushed |

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By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description Lab Notes | Asbestos | Fibrous | Non-Fibrous | Attributes |
|----------------|----------------------------|---------------|---------------|-------------------------|--------------------------------------|
| Lab Sample ID | Lab ivoles | | Components | Components | Treatment |
| D3 - B | Plaster | None Detected | | 80% Other 20% Quartz | Gray Non Fibrous Homogeneous |
| 1703968PLM_109 | base | | | | Crushed |
| D4 - A | Plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_15 | finish | | | | Crushed |
| D4 - B | Plaster | None Detected | | 80% Other 20% Quartz | Gray Non Fibrous Homogeneous |
| 1703968PLM_110 | base | | | | Crushed |
| D5 - A | Plaster | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_16 | finish | | | | Crushed |
| D5 - B | Plaster | None Detected | | 80% Other 20% Quartz | Gray Non Fibrous Homogeneous |
| 1703968PLM_111 | base | | | | Crushed |
| E1 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_17 | drywall | | | | Crushed |
| E1 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_112 | joint compound | | | | Crushed |
| E2 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_18 | drywall | | | | Crushed |

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Bethany Nichols (127)

Analyst



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017
Date Reported: 3/1/2017

Project:

GTC Building 502

| Sample ID | Description | A 1 4 | Fibrous | Non-Fibrous | Attributes |
|----------------|----------------------------|---------------|---------------|-------------|--------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| E2 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_113 | joint compound | | | | Crushed |
| E3 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_19 | drywall | | | | Crushed |
| E3 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_114 | joint compound | | | | Crushed |
| E4 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_20 | drywall | | | | Crushed |
| E4 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_115 | joint compound | | | | Crushed |
| E5 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_21 | drywall | | | | Crushed |
| E5 - B | Drywall and Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1703968PLM_116 | joint compound | | | | Crushed |
| F1 | Vault Door Insulation | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM 22 | | | | | Crushed |

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By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017

Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | A | Fibrous | Non-Fibrous | Attributes |
|---------------|--------------------------------|----------------|------------|-------------|------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| F2 | Vault Door Insulation | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_23 | | | | | Crushed |
| F3 | Vault Door Insulation | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_24 | | | | | Crushed |
| G1 | Gray Window Caulking | 3% Chrysotile | | 97% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_25 | | | | | Dissolved |
| G2 | Gray Window Caulking | Not Analyzed | | | |
| 1703968PLM_26 | | | | | |
| G3 | Gray Window Caulking | Not Analyzed | | | |
| 1703968PLM_27 | | | | | |
| H1 | Black/White Window Caulking | 10% Chrysotile | | 90% Other | Gray Fibrous Heterogeneous |
| 1703968PLM_28 | | | | | Dissolved, Teased |
| H2 | Black/White Window Caulking | Not Analyzed | | | |
| 1703968PLM_29 | | | | | |
| Н3 | Black/White Window Caulking | Not Analyzed | | | |
| | | | | | |

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Bethany Nichols (127)

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|-----------------------|----------------------|--------------------|
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By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | Aabaataa | Fibrous | Non-Fibrous | Attributes |
|----------------|------------------|---------------|---------------|-------------|---|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| I1 | FRP Board Mastic | None Detected | | 100% Other | Tan Non Fibrous Homogeneous |
| 1703968PLM_31 | | | | | Dissolved |
| I2 | FRP Board Mastic | None Detected | | 100% Other | Tan Non Fibrous Homogeneous |
| 1703968PLM_32 | | | | | Dissolved |
| 13 | FRP Board Mastic | Not Analyzed | | | |
| 1703968PLM_33 | TEM | | | | |
| J1 | Fireproofing | None Detected | 90% Cellulose | 10% Other | Gray Fibrous Homogeneous |
| 1703968PLM_34 | | | | | Teased, Ashed |
| J2 | Fireproofing | None Detected | 90% Cellulose | 10% Other | Gray Fibrous Homogeneous |
| 1703968PLM_35 | | | | | Teased, Ashed |
| J3 | Fireproofing | None Detected | 90% Cellulose | 10% Other | Gray Fibrous Homogeneous |
| 1703968PLM_36 | | | | | Teased, Ashed |
| J4 | | None Detected | 90% Cellulose | 10% Other | Gray Fibrous Homogeneous |
| 1703968PLM_117 | not on coc | | | | Teased, Ashed |
| K1 | Blockwall Filler | None Detected | | 100% Other | White, Gray Non Fibrous Heterogeneous |
| 1703968PLM_37 | | | | | Dissolved |

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Bethany Nichols (127)

Analyst



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores **Lab Order ID: 1703968**

Analysis ID: 1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | Asbestos | Fibrous | Non-Fibrous | Attributes |
|---------------|----------------------------------|---------------|------------|-------------|---|
| Lab Sample ID | Lab Notes | Aspestos | Components | Components | Treatment |
| K2 | Blockwall Filler | None Detected | | 100% Other | White, Gray Non Fibrous Heterogeneous |
| 1703968PLM_38 | | | | | Crushed, Dissolved |
| K3 | Blockwall Filler | Not Analyzed | | | |
| 1703968PLM_39 | TEM | | | | |
| L1 | Blockwall Filler | None Detected | | 100% Other | White, Gray Non Fibrous Heterogeneous |
| 1703968PLM_40 | | | | | Crushed, Dissolved |
| L2 | Blockwall Filler | None Detected | | 100% Other | White, Gray Non Fibrous Heterogeneous |
| 1703968PLM_41 | | | | | Crushed, Dissolved |
| L3 | Blockwall Filler | Not Analyzed | | | |
| 1703968PLM_42 | TEM | | | | |
| M1 | Caulking around Sink Drop Ins | None Detected | | 100% Other | Tan Non Fibrous Homogeneous |
| 1703968PLM_43 | | | | | Dissolved |
| M2 | Caulking around Sink Drop Ins | None Detected | | 100% Other | Tan Non Fibrous Homogeneous |
| 1703968PLM_44 | | | | | Dissolved |
| M3 | Caulking around Sink Drop Ins | Not Analyzed | | | |
| 1703968PLM_45 | TEM | | | | |

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Bethany Nichols (127)

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By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores **Lab Order ID: 1703968**

Analysis ID: 1703968_PLM

Date Received: 2/27/2017

Date Reported: 3/1/2017

Project:

P-F-002 r15 1/15/2018

GTC Building 502

| Sample ID | Description | Anhantan | Fibrous | Non-Fibrous | Attributes |
|---------------|----------------------------------|---------------|---------------|-------------|--------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| N1 | White Sink Mastic | None Detected | 20% Cellulose | 80% Other | White Non Fibrous Homogeneous |
| 1703968PLM_46 | | | | | Dissolved |
| N2 | White Sink Mastic | None Detected | 20% Cellulose | 80% Other | White Non Fibrous Homogeneous |
| 1703968PLM_47 | | | | | Dissolved |
| N3 | White Sink Mastic | Not Analyzed | | | |
| 1703968PLM_48 | TEM | | | | |
| O1 | Caulking around Sink Drop Ins | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_49 | | | | | Dissolved |
| O2 | Caulking around Sink Drop Ins | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_50 | | | | | Dissolved |
| O3 | Caulking around Sink Drop Ins | Not Analyzed | | | |
| 1703968PLM_51 | TEM | • | | | |
| P1 | Lite Brown Cove Base Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_52 | | | | | Dissolved |
| P2 | Lite Brown Cove Base Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_53 | | | | | Dissolved |

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Bethany Nichols (127)

Analyst Approved Signatory



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID:

1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project:

GTC Building 502

| Sample ID | Description | A 1 4 | Fibrous | Non-Fibrous | Attributes |
|----------------|-----------------------------|---------------|---------------|-------------|--------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| Р3 | Lite Brown Cove Base Mastic | Not Analyzed | | | |
| 1703968PLM_54 | TEM | | | | |
| Q1 | Gray Floor Leveler | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_55 | | | | | Crushed |
| Q2 | Gray Floor Leveler | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_56 | | | | | Crushed |
| Q3 | Gray Floor Leveler | Not Analyzed | | | |
| 1703968PLM_57 | TEM | | | | |
| R1 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_58 | drywall | | | | Crushed |
| R1 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_118 | joint compound | | | | Crushed |
| R2 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_59 | drywall | | | | Crushed |
| R2 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 703968PLM_119 | joint compound | | | | Crushed |

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Bethany Nichols (127)

Analyst



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

GTC Building 502 Project:

| Sample ID | Description | A -14 | Fibrous | Non-Fibrous | Attributes |
|----------------|----------------------------|---------------|---------------|-------------|--------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| R3 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_60 | drywall | | | | Crushed |
| R3 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_120 | joint compound | | | | Crushed |
| R4 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_61 | drywall | | | | Crushed |
| R4 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_121 | joint compound | | | | Crushed |
| R5 - A | Drywall and Joint Compound | None Detected | 15% Cellulose | 85% Other | Gray Non Fibrous Heterogeneous |
| 1703968PLM_62 | drywall | | | | Crushed |
| R5 - B | Drywall and Joint Compound | None Detected | | 100% Other | White Non Fibrous Homogeneous |
| 1703968PLM_122 | joint compound | | | | Crushed |
| S1 | Gray Window Caulking | 2% Chrysotile | 5% Other | 93% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_63 | | | | | Dissolved |
| S2 | Gray Window Caulking | Not Analyzed | | | |
| 1703968PLM_64 | | | | | |

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Bethany Nichols (127)



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID:

1703968 PLM

Date Received: 2/27/2017

Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | Aghastas | Fibrous | Non-Fibrous | Attributes |
|---------------|------------------------|---------------|----------------------------------|--------------------------|---|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| S3 | Gray Window Caulking | Not Analyzed | | | |
| 1703968PLM_65 | | | | | |
| T1 | Brown Mastic on Brown | None Detected | | 100% Other | Yellow, Brown Non Fibrous Heterogeneous |
| 1703968PLM_66 | | | | | Dissolved |
| T2 | Brown Mastic on Brown | None Detected | | 100% Other | Yellow, Brown Non Fibrous Heterogeneous |
| 1703968PLM_67 | | | | | Dissolved |
| Т3 | Brown Mastic on Brown | Not Analyzed | | | |
| 1703968PLM_68 | TEM | | | | |
| U1 | Beige Cove Base Mastic | None Detected | | 100% Other | Yellow, White Non Fibrous Heterogeneous |
| 1703968PLM_69 | | | | | Crushed, Dissolved |
| U2 | Beige Cove Base Mastic | None Detected | | 100% Other | Yellow Non Fibrous Homogeneous |
| 1703968PLM_70 | | | | | Dissolved |
| U3 | Beige Cove Base Mastic | Not Analyzed | | | |
| 1703968PLM_71 | TEM | | | | |
| V1 | 2x4 Ceiling Tile | None Detected | 40% Cellulose 40% Fiber Glass | 10% Perlite 10% Other | White, Gray Fibrous Homogeneous |
| 1703968PLM 72 | | | 1070 X 1001 G1433 | TO 70 Other | Ashed, Teased |

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Bethany Nichols (127)

Analyst



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores **Lab Order ID:** 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project:

GTC Building 502

| Sample ID | Description | A | Fibrous | Non-Fibrous | Attributes |
|------------------------|------------------------|---------------|----------------------------------|--------------------------|---------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| V2 | 2x4 Ceiling Tile | None Detected | 40% Cellulose 40% Fiber Glass | 10% Perlite 10% Other | White, Gray Fibrous Homogeneous |
| 1703968PLM_ 7 3 | | | | | Ashed, Teased |
| V3 | 2x4 Ceiling Tile | None Detected | 40% Cellulose 40% Fiber Glass | 10% Perlite 10% Other | White, Gray Fibrous Homogeneous |
| 1703968PLM_74 | | | | | Ashed, Teased |
| W1 | 2x2 Ceiling Tile | None Detected | 40% Cellulose 40% Fiber Glass | 10% Perlite 10% Other | White, Gray Fibrous Homogeneous |
| 1703968PLM_75 | | | | | Ashed, Teased |
| W2 | 2x2 Ceiling Tile | None Detected | 40% Cellulose 40% Fiber Glass | 10% Perlite 10% Other | White, Gray Fibrous Homogeneous |
| 1703968PLM 76 | | | | | Ashed, Teased |
| W3 | 2x2 Ceiling Tile | None Detected | 40% Cellulose 40% Fiber Glass | 10% Perlite 10% Other | White, Gray Fibrous Homogeneous |
| 1703968PLM_77 | | | | | Ashed, Teased |
| X1 | Gray Exterior Caulking | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_78 | | | | | Dissolved |
| X2 | Gray Exterior Caulking | None Detected | | 100% Other | Gray Non Fibrous Homogeneous |
| 1703968PLM_79 | | | | | Dissolved |
| X3 | Gray Exterior Caulking | Not Analyzed | | | |
| 1703968PLM_80 | TEM | Ĭ | | | |

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Bethany Nichols (127)

P.F-002 rl5 1/15/2018

Analyst

Approved Signatory



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores

Lab Order ID: 1703968

Analysis ID: 1703968_PLM

Date Received: 2/27/2017 Date Reported: 3/1/2017

Project: GTC Building 502

| Sample ID | Description | Asbestos | Fibrous | Non-Fibrous | Attributes |
|----------------|------------------------|---------------|---------------------------------|-------------------------|-----------------------------------|
| Lab Sample ID | Lab Notes | Asucstus | Components | Components | Treatment |
| Y1 | Exterior Waterproofing | None Detected | 30% Cellulose | 70% Other | Black Fibrous Heterogeneous |
| 1703968PLM_81 | | | | | Dissolved, Teased |
| Y2 | Exterior Waterproofing | None Detected | 30% Cellulose | 70% Other | Black Fibrous Heterogeneous |
| 1703968PLM_82 | | | | | Dissolved, Teased |
| Y3 | Exterior Waterproofing | Not Analyzed | | | |
| 1703968PLM_83 | ТЕМ | | (| | |
| Z1 | Built-Up Roofing | None Detected | 30% Fiber Glass 5% Cellulose | 65% Other | Black Fibrous Heterogeneous |
| 1703968PLM_84 | | | | | Dissolved, Teased |
| Z2 - A | Built-Up Roofing | None Detected | 30% Fiber Glass 5% Cellulose | 65% Other | Black Fibrous Heterogeneous |
| 1703968PLM_85 | built up roofing | | e / Contains | | Dissolved, Teased |
| Z2 - B | Built-Up Roofing | None Detected | 85% Cellulose | 10% Perlite 5% Other | Brown Fibrous Homogeneous |
| 1703968PLM_123 | insulation | | | 370 Gilli | Teased, Ashed |
| Z3 - A | Built-Up Roofing | Not Analyzed | | | |
| 1703968PLM_86 | built up roofing - TEM | | | | |
| Z3 - B | Built-Up Roofing | Not Analyzed | | | |
| 1703968PLM_124 | felt on foam - TEM | | | | |

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Bethany Nichols (127)

P-F-002 r15 1/15/2018

Analyst Approved Signatory



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores Lab Order ID: 1703968

Analysis ID:

1703968_PLM

Date Reported: 3/1/2017

Date Received: 2/27/2017

Project:

P-F-002 r15 1/15/2018

GTC Building 502

| Sample ID | Description | Asbestos | Fibrous | Non-Fibrous | Attributes |
|----------------|----------------------|---------------|---|-------------|---|
| Lab Sample ID | Lab Notes | Aspesios | Components | Components | Treatment |
| Z3 - C | Built-Up Roofing | None Detected | 95% Cellulose | 5% Other | Brown Fibrous Homogeneous |
| 1703968PLM_125 | insulation | | | | Teased, Ashed |
| AA1 | Edge Flashing | None Detected | 40% Fiber Glass | 60% Other | Black Fibrous Heterogeneous |
| 1703968PLM_87 | | | | | Dissolved, Teased |
| AA2 | Edge Flashing | None Detected | 30% Fiber Glass 10% Cellulose | 60% Other | Black Fibrous Heterogeneous |
| 1703968PLM_88 | | | | | Dissolved, Teased |
| AA3 | Edge Flashing | Not Analyzed | | | |
| 1703968PLM_89 | TEM | | | | |
| AB1 | Roof Mastic | None Detected | 30% Cellulose | 70% Other | Black, Gray Fibrous Heterogeneous |
| 1703968PLM_90 | | | | | Dissolved, Teased |
| AB2 | Roof Mastic | None Detected | 30% Cellulose | 70% Other | Black, Gray Fibrous Heterogeneous |
| 1703968PLM_91 | | | | | Dissolved, Teased |
| AB3 | Roof Mastic | Not Analyzed | | | |
| 1703968PLM_92 | TEM | | | | |
| AC1 - A | Penetration Flashing | None Detected | 30% Fiber Glass 10% Synthetic Fibers | 60% Other | Black Fibrous Heterogeneous |
| 1703968PLM 93 | built up roofing | | | | Dissolved, Teased |

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Bethany Nichols (127)

Analyst Approved Signatory



By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020





Customer:

Project:

Terracon

72 Pointe Circle

GTC Building 502

Greenville, SC 29615

Attn: Stephen Ellis

George Flores

Lab Order ID: 1703968

Analysis ID:

1703968 PLM

Date Received: 2/27/2017

Date Reported: 3/1/2017

| Sample ID Lab Sample ID | Description Lab Notes | Asbestos | Fibrous Components | Non-Fibrous Components | Attributes Treatment |
|--------------------------|-----------------------------|---------------|---|---------------------------|---|
| AC1 - B | Penetration Flashing | None Detected | 85% Cellulose | 10% Perlite 5% Other | Brown Fibrous Homogeneous |
| 1703968PLM_126 | insulation | | | | Teased, Ashed |
| AC2 - A | Penetration Flashing | None Detected | 30% Fiber Glass 10% Synthetic Fibers | 60% Other | Black Fibrous Heterogeneous |
| 1703968PLM_94 | built up roofing | | | | Dissolved, Teased |
| AC2 - B | Penetration Flashing | None Detected | 85% Cellulose | 10% Perlite 5% Other | Brown Fibrous Homogeneous |
| 1703968PLM_127 | insulation | | | | Teased, Ashed |
| AC3 | Penetration Flashing | Not Analyzed | | | |
| 1703968PLM_95 | built up roofing only - TEM | | | | |
| AD1 | Silver Roof Mastic | None Detected | 20% Fiber Glass | 80% Other | Black, Silver Fibrous Heterogeneous |
| 1703968PLM_96 | | | | | Dissolved, Teased |
| AD2 | Silver Roof Mastic | None Detected | | 100% Other | Black, Silver Non Fibrous Heterogeneous |
| 1703968PLM_97 | | | | | Dissolved |
| AD3 | Silver Roof Mastic | Not Analyzed | | | |
| 1703968PLM_98 | TEM | | | | |

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Bethany Nichols (127)



Semi-Quantitative Chatfield SOP 1988-02 Rev. 1

Customer: Terracon

72 Pointe Circle

Greenville, SC 29615

Project:

GTC Building 502

Stephen Ellis

George Flores

Lab Order ID:

1704286

Analysis ID:

1704286_TBS

Date Received:

3/2/2017

Date Reported: 3/7/2017

| Sample ID Lab Sample ID | Description Lab Notes | Organic | Acid Sol. | Asbestos (Wt. %) | LCL-UCL (Wt. %) |
|--------------------------|---|---------|--------------|------------------|-----------------|
| A3 - A | 12" White Floor Tile and Yellow Mastic | 12% | 12% 59% | None Detected | |
| 1704286TBS_1 | tile | | | | |
| A3 - B | 12" White Floor Tile and Yellow Mastic | 65% | | None Detected | |
| 1704286TBS_2 | mastic | | | | |
| В3 | Mixed Cove Base Mastics | 32% | * | None Detected | |
| 1704286TBS_3 | | | | | |
| С3 | Yellow Carpet Mastic | 34% | | None Detected | |
| 1704286TBS_4 | | | | | |
| 13 | FRP Board Mastic | 26% | | None Detected | |
| 1704286TBS_5 | | | | | |
| К3 | Blockwall Filler | 11% | | None Detected | |
| 1704286TBS_6 | | | | | |

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Russell Shelton (22)

Analyst

Approved Signatory

T-F-010 r15 1/15/2018 tem_2.2.001

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Page 1 of 4



Semi-Quantitative Chatfield SOP 1988-02 Rev. 1

Customer: Terracon

Project:

72 Pointe Circle

GTC Building 502

Attn: Stephen Ellis

Lab Order ID:

1704286

Greenville, SC 29615

George Flores

Analysis ID:

1704286 TBS

Date Received:

3/2/2017

Date Reported:

3/7/2017

| Sample ID Lab Sample ID | Description Lab Notes | Organic | Acid Sol. (Wt. %) | | | LCL-UCL |
|--------------------------|-------------------------------|---------|-------------------------|---------------|---------------|-------------|
| L3 | Blockwall Filler | 28% | | 3.6 % | Chrysotile | 3.2% - 3.9% |
| 1704286TBS_7 | | | | | | |
| M3 | Caulking around Sink Drop Ins | 14% | - | None Detected | | • |
| 1704286TBS_8 | | | | | | |
| N3 | White Sink Mastic | 28% | | | None Detected | |
| 1704286TBS_9 | | | | | | |
| О3 | Caulking around Sink Drop Ins | 30.% | 87 | | None Detected | |
| 1704286TBS_10 | | | | | | |
| Р3 | Lite Brown Cove Base Mastic | 41% | | | None Detected | |
| 1704286TBS_11 | | | | | | |
| Q3 | Gray Floor Leveler | 13% | | | None Detected | |
| 1704286TBS_12 | | | | | | |

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Russell Shelton (22)

Approved Signatory

T-F-010 r15 1/15/2018

(336) 292-3888



Semi-Quantitative Chatfield SOP 1988-02 Rev. 1

Customer: Terracon

Project:

72 Pointe Circle

Greenville, SC 29615

Attn: Stephen Ellis Lab Order ID:

1704286

GTC Building 502

George Flores

Analysis ID:

1704286 TBS

Date Received:

3/2/2017

Date Reported:

3/7/2017

| Sample ID Lab Sample ID | Description Lab Notes | Organic | Acid Sol. | Asbestos (Wt. %) | LCL-UCI |
|--------------------------|------------------------|---------|--------------|------------------|---------|
| Т3 | Brown Mastic on Brown | 39% | | None Detected | |
| 1704286TBS_13 | | | | | |
| U3 | Beige Cove Base Mastic | 47% | 98 | None Detected | |
| 1704286TBS_14 | | | | | |
| Х3 | Gray Exterior Caulking | 65% | ¥1 | None Detected | |
| 1704286TBS_15 | | | | | |
| Y3 | Exterior Waterproofing | 35% | 1 <u>11</u> | None Detected | |
| 1704286TBS_16 | | | | | |
| Z3 - A | Built-Up Roofing | 93% | * | None Detected | |
| 1704286TBS_17 | built up roofing | | | - | |
| Z3 - B | Built-Up Roofing | 75% | | None Detected | |
| 1704286TBS_18 | felt on foam | | | | |

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Russell Shelton (22)

Analyst



Semi-Quantitative Chatfield SOP 1988-02 Rev. 1

Customer: Terracon

Project:

72 Pointe Circle

Greenville, SC 29615

GTC Building 502

Attn: Stephen Ellis

George Flores

Lab Order ID:

1704286

Analysis ID:

1704286_TBS

Date Received:

3/2/2017

Date Reported:

3/7/2017

| Sample ID Lab Sample ID | Description Lab Notes | Organic | Acid Sol. | | | LCL-UCL |
|--------------------------|------------------------|---------|--------------|---------------|------------|-------------|
| AA3 | Edge Flashing | 83% | | None Detected | | |
| 1704286TBS_19 | | | | | | |
| AB3 | Roof Mastic | 41% | , | 3.0 % | Chrysotile | 2.7% - 3.2% |
| 1704286TBS_20 | | | | | | |
| AC3 | Penetration Flashing | 47% | £ | None Detected | | |
| 1704286TBS_21 | | | | | | |
| AD3 | Silver Roof Mastic | 3.1% | | None Detected | | |
| 1704286TBS_22 | | | | | | |

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Russell Shelton (22)

Analyst

Client: Terracon Contact: Stephen Ellis Address: 72 Pointe Circle, Greenville, SC 29615 Phone: 423-426-2164 Fax: Email: stephen.ellis@terracon.com george.flores2@terracon.com Project: GTC Building 502 Client Notes: Positive Stop P.O. #. Date Submitted: 2-24-17 1700 Analysis: PLM EPA 600 / TEM Chatfield TurnAroundTime: Stary Plantanout Carriet Atte

*Instructions: Use Column *B* for your contact info To See an Example Click the bottom Example Tab. Enter samples between "<<" and ">>" Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample. Only Enter your data on the first sheet "Sheet!"

> Relinquished by: Stephen Ellis

Version 1-15-2012





4604 Dundas Drive Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Emall: lab@sallab.com

| Sample Number | Data 1 | Sample Description | Data 2 | (IV) STATES |
|---------------|-----------|---|--------|------------------|
| << | | | | CHARLES THE REAL |
| A1 | 1- | 12" White Floor Tile and Yellow Mastic | PLM | |
| A2 | | 12" White Floor Tile and Yellow Mastic | PLM | |
| A3 | | 12" White Floor Tile and Yellow Mastic | TEM | |
| A4 | | 12" White Floor Tile and Yellow Mastic | PLM | |
| A5 | | 12" White Floor Tile and Yellow Mastic | PLM | |
| B1 | | Mixed Cove Base Mastics | PLM | |
| B2 | | Mixed Cove Base Mastics | PLM | |
| B3 | | Mixed Cove Base Mastics | TEM | |
| C1 | | Yellow Carpet Mastic | PLM | |
| ·C2 | " a a a a | to be a first to the control of the | PLM. | |
| C3 | | Yellow Carpet Mastic | TEM | - |
| D1 | | Plaster | PLM | |
| D2 | | Plaster | PLM | |
| D3 | | Plaster | PLM | Λ. |
| D4 | | Plaster | PLM | 11001 |
| D5 | | Plaster | | 1 000 |
| E1 | | Drywall and Joint Compound | PLM | YN. |
| E2 | | Drywall and Joint Compound | PLM Q | Ø. |
| | | Drywan and John Compound | PLM 😲 | |
| | | | | V CT |

Mular gook

Accepted D

Rejected D

| Drywaii and John Compound | LLIM |
|---|--------|
| Drywall and Joint Compound | PLM |
| Drywail and Joint Compound | PLM |
| Vault Door Insulation | PLM |
| Vault Door Insulation | PLM |
| Vault Door Insulation | PLM |
| Gray Window Caulking | PLM |
| Gray Window Caulking | PLM |
| Gray Window Caulking | TEM |
| Black/White Window Caulking | PLM |
| Black/White Window Caulking | PLM |
| Black/White Window Caulking | TEM |
| FRP Board Mastic | PLM |
| FRP Board Mastic | PLM |
| FRP Board Mastic | TEM |
| Fireproofing | PLM |
| Fireproofing | PLM |
| Fireproofing | PLM |
| Blockwall Filler | PLM |
| Blockwall Filler | PLM |
| Blockwall Filler | TEM |
| Blockwall Filler | PLM |
| Blockwall Filler | PLM |
| Blockwall Filler | TEM |
| Caulking around Sink Drop Ins | PLM |
| Caulking around Sink Drop Ins | PLM |
| Caulking around Sink Drop Ins | TEM |
| White Sink Mastic | PLM |
| White Sink Mastic | PLM |
| White Sink Mastlc | TEM |
| Caulking around Sink Drop Ins | PLM |
| Caulking around Sink Drop Ins | PLM |
| Caulking around Sink Drop Ins | TEM |
| Little Flancis Control Programme Administration | m1 5 2 |

PLM

PLM

TEM

PLM

Drywall and Joint Compound

Lite Brown Cove Base Mastic

Lite Brown Cove Base Mastic

Lite Brown Cove Base Mastic

Gray Floor Leveler

E3

E4

E6 F1 F2 F3 G1 G2 G3 H1 H2 H3 H1 I2 I3 J1

J2 J3 K1 K2 K3

L1 L2 L3 M1 M2 M3 N1 N2 N3 O1 O2 O3 P1

P2

P3

Q1

| 17639to8 | |
|----------|--|
| 1704286 | |

| Q2 | | | Gray Floor Leveler | PLM |
|-----------|----|----|----------------------------|-----|
| Q3 | | | Gray Floor Leveler | TEM |
| R1 | | | Drywall and Joint Compound | PLM |
| R2 | | | Drywall and Joint Compound | PLM |
| R3 | | | Drywall and Joint Compound | PLM |
| R4 | | | Drywall and Joint Compound | PLM |
| R5 | | | Drywall and Joint Compound | PLM |
| S1 | | | Gray Window Caulking | PLM |
| S2 | | | Gray Window Caulking | PLM |
| S3 | | | Gray Window Caulking | TEM |
| T1 | | | Brown Mastic on Brown | PLM |
| T2 | | | Brown Mastic on Brown | PLM |
| T3 | | | Brown Mastic on Brown | TEM |
| U1 | | | Beige Cove Base Mastic | PLM |
| U2 | | | Beige Cove Base Mastic | PLM |
| U3 | | | Beige Cove Base Mastic | TEM |
| V1 | | | 2x4 Ceiling Tile | PLM |
| V2 | | | 2x4 Ceiling Tile | PLM |
| V3 | | | 2x4 Ceiling Tile | PLM |
| W1 | | | 2x2 Ceiling Tile | PLM |
| W2 | | | 2x2 Ceiling Tile | PLM |
| W3 | | | 2x2 Ceiling Tile | PLM |
| X1 | | | Gray Exterior Caulking | PLM |
| X2 | | | Gray Exterior Caulking | PLM |
| X3 | | | Gray Exterior Caulking | TEM |
| Y1 | | | Exterior Waterproofing | PLM |
| Y2 | | | Exterior Waterproofing | PLM |
| Y3 | | | Exterior Waterproofing | TEM |
| -Z1 | | | Built-Up Roofing | PLM |
| Z2 | 79 | 20 | Built-Up Roofing | PLM |
| Z3 | | | Built-Up Roofing | TEM |
| AA1 | | | Edge Flashing | PLM |
| AA2 | | | Edge Flashing | PLM |
| AA3 | | | Edge Flashing | TEM |
| AB1 | | | Roof Mastic | PLM |
| AB2 | | | Roof Mastic | PLM |
| AB3 | | | Roof Mastic | TEM |
| | | | | |

| AC1 AC2 | |
|------------|--|
| AC3 AD1 | |
| AD2 AD3 | |
| >> | |

PLM PLM TEM PLM PLM PLM 1704286





By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020

nvlap

Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores **Lab Order ID:** 1704504

Analysis ID: 1

1704504 PLM

Date Received: 3/3/2017

Date Reported: 3/6/2017

Project: 86177029 - GTC Building 502

| Sample ID | Description | A ala a - 4 a a | Fibrous | Non-Fibrous | Attributes |
|---------------|--------------------------|-----------------|---------------|-------------|------------------------------------|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| E6 - A | Drywall & Joint Compound | None Detected | 10% Cellulose | 90% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_1 | drywall | | | | Crushed |
| E6 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM_11 | joint compound | | | | Crushed |
| E7 - A | Drywall & Joint Compound | None Detected | 8% Cellulose | 92% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_2 | drywall | | | | Crushed |
| E7 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM_12 | joint compound | | | | Crushed |
| E8 - A | Drywall & Joint Compound | None Detected | 10% Cellulose | 90% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_3 | drywall | | | | Crushed |
| E8 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM_13 | joint compound | | | | Crushed |
| E9 - A | Drywall & Joint Compound | None Detected | 10% Cellulose | 90% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_4 | drywall | | | | Crushed |
| E9 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM 14 | joint compound | | | | Crushed |

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Heather Davide (17)

Analys







By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020

Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis George Flores

Lab Order ID: 1704504

Analysis ID: 1704504 PLM

Date Received: 3/3/2017 Date Reported: 3/6/2017

Project: 86177029 - GTC Building 502

| Sample ID | Description | A -14 | Fibrous | Non-Fibrous | Attributes |
|---------------|---------------------------|---------------|---------------|-------------|--|
| Lab Sample ID | Lab Notes | Asbestos | Components | Components | Treatment |
| E10 - A | Drywall & Joint Compound | None Detected | 10% Cellulose | 90% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_5 | drywall | | | e | Crushed |
| E10 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM_15 | joint compound | | | | Crushed |
| E11 - A | Drywall & Joint Compound | None Detected | 8% Cellulose | 92% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_6 | drywall | | | | Crushed |
| E11 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM_16 | joint compound | | | | Crushed |
| E12 - A | Drywall & Joint Compound | None Detected | 8% Cellulose | 92% Other | Gray Non Fibrous Homogeneous |
| 1704504PLM_7 | drywall | | | | Crushed |
| E12 - B | Drywall & Joint Compound | 3% Chrysotile | | 97% Other | Tan Non Fibrous Homogeneous |
| 1704504PLM_17 | joint compound | | | | Crushed |
| AE1 | Canvas Wallpaper | None Detected | | 100% Other | White, Tan Non Fibrous Homogeneous |
| 1704504PLM_8 | paint/plaster inseparable | | | | Crushed, Dissolve |
| AE2 | Canvas Wallpaper | None Detected | | 100% Other | White, Tan Non Fibrous Homogeneous |
| 1704504PLM_9 | paint/plaster inseparable | | | | Crushed, Dissolve |

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Heather Davide (17)







By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020

Customer: Terracon

72 Pointe Circle

Greenville, SC 29615

Attn: Stephen Ellis

George Flores

Lab Order ID: 1704504

Analysis ID:

1704504 PLM

Date Received: 3/3/2017

Date Reported: 3/6/2017

Project:

P-F-002 r15 1/15/2018

86177029 - GTC Building 502

| Sample ID | Description Lab Notes | Ashartas | Fibrous | Non-Fibrous | Attributes |
|----------------------|------------------------|--------------|------------|-------------|------------|
| Lab Sample ID | | Asbestos | Components | Components | Treatment |
| AE3 Canvas Walipaper | | Not Analyzed | | | |
| 1704504PLM_10 | TEM | | | | |

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Heather Davide (17)

Analyst

*Instructions: Version 1-15-2012

Client: Terracon Contact: Stephen Ellis Use Column "B" for your contact info 72 Pointe Circle. Greenville, SC 29615 Address: Phone: 423-426-2164 To See an Example Click the bottom Example Tab. Fax: Email: stephen.ellis@terracon.com Enter samples between "<<" and ">>" George Flores2@terracon.com Project: 86177029 - GTC Building 502 Begin Samples with a "<< "above the first sample Scientific and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1" Analytical Client Notes: Institute P.O. #.

Date Submitted:

Analysis: TurnAroundTime:

3/2/2017 1600

PLM EPA 600

3 Day TAT

Relinquished by Stephen Ellis

4604 Dundas Drive Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sailab.com

| Sample Number | Data 1 | Sample Description | Data 2 |
|---------------|-----------------|--------------------------|------------------------------|
| << | A.E. | | |
| E6 | | Drywall & Joint Compound | PLM |
| E7 | | Drywall & Joint Compound | PLM |
| E8 | LIDY BUILDING | Drywall & Joint Compound | PLM |
| E9 | | Drywall & Joint Compound | PLM |
| E10 | | Drywall & Joint Compound | PLM |
| E11 | | Drywall & Joint Compound | PLM |
| E12 | | Drywall & Joint Compound | PLM |
| AE1 | AND THE RESERVE | Canvas Wallpaper | PLM - Call About Layering |
| AE2 | | Canvas Wallpaper | PLM - Call About Layering |
| AE3 | | Canvas Wallpaper | PLM - Call About Layering |
| CHITAL | | | TATAOL DESTRIBUTION CHICAGON |

Bymling solv Accepted D



Semi-Quantitative Chatfield SOP 1988-02 Rev. 1

Customer: Terracon

Project:

Stephen Ellis Attn:

Lab Order ID:

1704677

72 Pointe Circle Greenville, SC 29615

86177029 - GTC Building 502

George Flores

Analysis ID:

1704677_TBS

Date Received:

3/7/2017

Date Reported:

3/9/2017

| Sample ID | Description Lab Notes | Organic | Acid Sol. | Asbestos (Wt. %) | LCL-UCL | |
|--------------|------------------------|---------|--------------|------------------|---------|--|
| AE3 | Canvas wallpaper | 47% | H) | None Detected | | |
| 1704677TBS_1 | | | | None Betteteu | | |

Disclaimer: This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

Russell Shelton (1)

17,04477 1764564-7

Version 1-15-2012

Contact: Stephen Ellis
Address: 72 Pointe Circle, Greenville, SC 29615
423-426-2164
Fax: stephen ellis@terracon.com
George.Flores2@terracon.com

Project: George Flores2@terracon.com 86177029 - GTC Building 502 Client Notes:

3/2/2017 1600

P.O.#. Date Submitted:

Chent

Analysis: PLM EPA 600

Terracon "Instructions:
Stephen Ettis Use Column "B" for your contact info

To See an Example Click the boftom Example Tab.

Enter samples between "<" and ">>"
Begin Samples with a "<" above the first sample
and end with a ">" below the last sample.
Only Enter your date on the first sheet "Sheet!"

Relinquished by Stephen Ellis Scientific Analytical Institute



4604 Dundas Drive Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 Email: lab@sallab.com

| Sample Number | Data 1 | Sample Description | Data 2 |
|---------------|------------------------|--------------------------|--------------------------------|
| << | | | |
| E6 | 7 | Drywall & Joint Compound | PLM |
| E7 | | Drywall & Joint Compound | PLM |
| E8 | | Drywall & Joint Compound | PLM |
| E9 | | Drywall & Joint Compound | PLM |
| E10 | 14800000 | Drywall & Joint Compound | PLM |
| E11 | | Drywall & Joint Compound | PLM |
| E12 | | Drywall & Joint Compound | PLM |
| AE1 | 1/2/2014/19/2015 12:34 | Canvas Wallpaper | PLM - Call About Layering |
| AE2 | | Canvas Wallpaper | PLM - Call About Layering |
| AE3 | | Canvas Wallpaper | PLM - Call About Layering |
| >> | | | - 2-11 - 2-1 involve Enjoining |

Bywlw Jack Accepted D



Analysis for Lead Concentration in Paint Chips



by Flame Atomic Absorption Spectroscopy EPA SW-846 3050B/6010C/7420

Customer: Terracon

72 Pointe Circle Greenville, SC 29615 Attn: Stephen Ellis

Lab Order ID: 1703987

Date Reported: 3/2/2017

Analysis ID:

1703987_PBP

Date Received: 2/27/2017

Project:

GTC Building 502

| Sample ID Lab Sample ID | Description Lab Notes | Mass (g) | Concentration (ppm) | Concentration (% by weight) |
|--------------------------|------------------------|----------|---------------------|-----------------------------|
| PC-1 | White paint on block | 0.0741 | < 54 | < 0.005% |
| PC-2 | White paint on metal | 0.0558 | 100 | 0.010% |
| PC-3 | Tan paint on metal | 0.0720 | 1400 | 0.14% |
| PC-4 | Tan paint on metal | 0.0510 | 2000 | 0.20% |

Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Analytical uncertainty available upon request. The quality control samples run with the samples in this report have passed all EPA required specifications unless otherwise noted. RL: (Report Limit for an undiluted 50ml sample is 4µg Total Pb).

Taylor Davis (4)

Laboratory Director



Scientific Analytical Institute 4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313 www.sailab.com lab@sailab.com

| Lab Use Only Lab Order ID: | } |
|----------------------------|---|
| Chefit Code. | ı |

| Contact Information | | | | Billing/Inv | Billing/Invoice Information | | | |
|---------------------------------------|-----------------------|------------|----------|-------------------|-----------------------------|-------------|---|--|
| Company Name: [erracoh | | | Company: | | | | | |
| Address: 72 Pointe Circle | | | | Address: | | | | |
| Greenville, | SL 29615 | | | | | | | |
| | | | | Contact: | | | | |
| Contact: Stephen Ellis | | | | Phone : | | | | |
| Phone X: | | | | Fax : | | | | |
| <i>Fax</i> □: | | | | Email : | | | | |
| Email X: Strohen | ellis 6 terracon | . colm | | | | | | |
| PO Number: | | | | Turn Around Times | | | | |
| Project Name/Number: GTC Pailding 502 | | | | 3 Hours | | 72 Hours | | |
| | | | | 6 Hours | | 96 Hours | | |
| Lead Test Types | | | | 12 Hours | | 120 Hours | | |
| Paint Chips by Flame AA [(PBP) | (PBS) | Other 🔲 | | 24 Hours | | 144+ Hours | | |
| Wipe by Flame AA ☐ (PBW) | Air by Flame AA (PBA) | | | 48 Hours | | | | |
| Sample ID # | Descripti | on/Locatio | | Volume/Are | a | Comments | | |
| 126-1 | Lhite Paint | on Block | ς | | | | | |
| P1-2 | White Pain | | | | | | | |
| PC-3 | Tan Paint | on Me | tal | | | | | |
| PC-4 | | on Met | | | | | | |
| | | | | | | 3 | | |
| | | | | | | 7 | | |
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| | | Acce | pted | | - | | | |
| | | Reje | cted | | | | | |
| | | | | Total Nu | mber c | of Samples4 | - | |
| Relinguished by | Date/ | rima . | Received | | | Date/Time | | |

2-24-17 1700

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SCDHEC ISSUED

Asbestos ID Card

Thomas H Tripp

Expiration Date



AIRSAMPLER AS-00247 11/03/17 CONSULTBI BI-00814 04/05/17 CONSULTPD PD-00178 10/20/17

Ferracon Consultants Inc. 72 Pointe Circle Greenville, SC 29615 P (864) 292-2901 F (864) 292-8361 Ferracon com

Environmental

Facilities

Geotechnical

Materials



Terracon Consultants, Inc. 72 Pointe Circle P (864) 292.2901

F (864) 292.6361

Greenville, SC 29615 terracon.com

Environmental **Facilities**

Geotechnical

Materials

| APPEN PHOTOGRAPHIC I | N | |
|-------------------------|---|--|
| | | |
| | | |





Photo #1 General view of the front office area



Photo #2 General view of the interior of the vault



Photo #3 General view of the front entry



Photo #4 General view of the partitioned offices, front section



Photo #5 General view of the front HVAC room



Photo #6 General view of sub-slab metal ductwork





Photo #7 General view of the middle open space



Photo #8 General view of the optometry room in the rear area



Photo #9 General view of the rear area



Photo #10 General view of the HVAC room in the rear area



Photo #11 General view of the space above the ceiling



Photo #12 12" white floor tile and yellow mastic ("A") found throughout the building





Photo #13 Mixed cove base mastic ("B") throughout the building.



Photo #14 Yellow carpet mastic ("C") in limited areas in the front offices



Photo #15 Plaster ("D") on limited walls in the front office area



Photo #16 Gypsum wall board ("E") in front area – associated joint compound contains asbestos

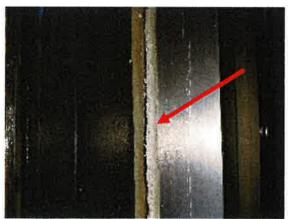


Photo #17 Gray caulking ("G") on interior doors and windows in the front office area – contains asbestos



Photo #18 Black/white caulk ("H") on the perimeter doors and windows, front office area – contains asbestos





Photo #19 Fireproofing ("J") on the perimeter structural steel ledger, front office area



Photo #20 Gypsum wallboard and joint compound ("R") in the rear area



Photo #21 Residual brown mastic ("T") on the brick walls in the elevated work room



Photo #22 Beige cove base mastic ("U"), limited areas in the rear section



Photo #23 Exterior caulking ("X") on expansion joints, doors, and windows



Photo #24 Exterior waterproofing ("Y") on the perimeter concrete foundations





Photo #25 Built-up roofing ("Z")



Photo #26 Edge flashing ("AA") along the perimeter of the roof.

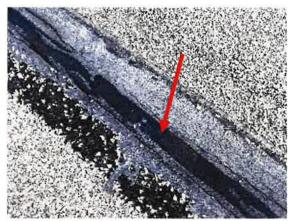


Photo #27 Black roof mastic ("AB"), various locations on the roof – contains asbestos

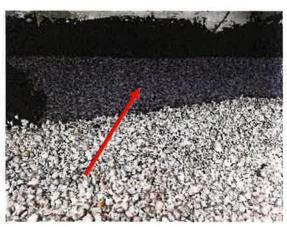


Photo #28 Penetration flashing ("AC") on various penetrations.

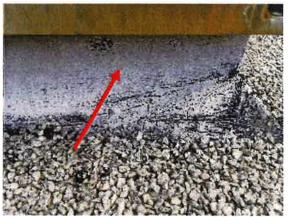


Photo #29 Silver sealant ("AD") on a roof top HVAC penetration



Photo #30 Light fixture gasket ("AF") in the front area HVAC closet – assumed to contain asbestos

Greenville Tech. Building (502)
South Pleasantburg Road
Greenville, South Carolina
State Project No. H59-N834-JM
Greenville – Building 502 Demolition
November 29, 2017
Terracon Project No. 86177029

Prepared for:

Greenville Technical College Greenville, South Carolina

Prepared by: Terracon Consultants, Inc. Greenville, South Carolina

George K. Flores, P.E.

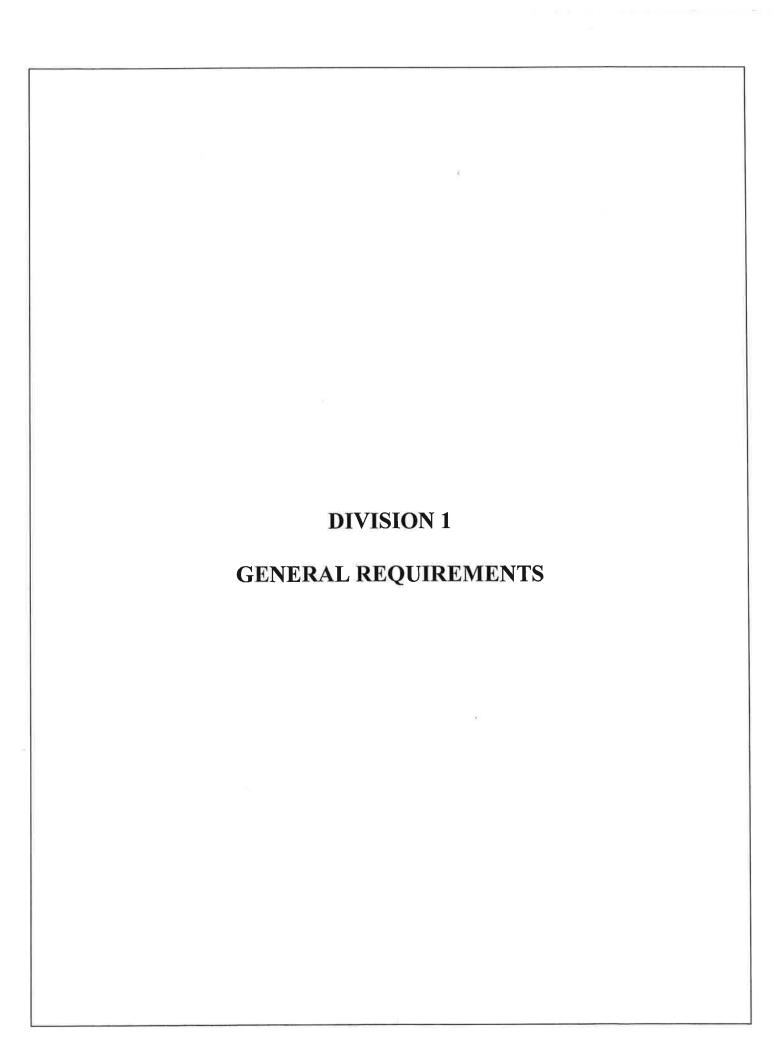
SC Asbestos Project Designer #PD-00146

Jeffrey A. Gurrie

SC Asbestos Project Designer #ASB-22728

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State Project No. H59-N834-JM Greenville – Building 502 Demolition November 29, 2017 Section 01013

SECTION 01013 - SUMMARY OF THE WORK

PART 1 - GENERAL

RELATED DOCUMENTS

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

PROJECT DIRECTORY

Owner:

Greenville Technical College

PO Box 5616

Greenville, South Carolina 29606

Representative: Bill Tripp

Designer:

Terracon Consultants, Inc.

72 Pointe Circle

Greenville, South Carolina 29615 Representative: Jeffrey Gurrie

Air Monitoring Firm

To be determined

PROJECT/WORK IDENTIFICATION

The project name is Asbestos Abatement for Greenville Tech Building 502 located on South Pleasantburg Dive in Greenville, South Carolina. The project involves the removal of asbestos-containing materials (ACM). A copy of the asbestos inspection report prepared by Terracon Consultants, Inc. (Terracon) is available for review by the Owner and is incorporated by reference.

This Work involves abatement of various materials in areas within the defined Work area identified on Figure A1 in the Drawings. The materials identified consist of:

- Drywall joint compound (3% chrysotile) in the front office area, Section A (approx. 5,000 SF);
- Gray caulking (3% chrysotile) on interior window/door system in the front office area, Section A (Approx. XXX);
- Black/white caulking (10% chrysotile) on perimeter window/door system in the front office area, Section A (Approx. XXXX);
- Block wall filler (3.6% chrysotile) in the open middle area, Section B (Approx. 1,650 SF);
- Gray caulking (2% chrysotile) on window/door system in the rear area, Section B and C (Approx. XXXX);

State Project No. H59-N834-JM Greenville – Building 502 Demolition November 29, 2017 Section 01013

- Black roof mastic (3.0% chrysotile) Approx. 10 SF); and,
- Light fixture gasket (assumed to contain asbestos) in the front area, Section A HVAC closet.

In general the Work will consist of the following:

I. Surfacing Materials

- A. Remove and dispose of drywall and asbestos-containing joint compound in the front section of the building as designated on Figure 1. Removal shall be within a full containment. See Section 02081 for additional work practices. Remove and dispose of fiberglass insulation above or behind gypsum walls and ceilings as asbestos contaminated waste.
- B. Remove and dispose of asbestos-containing block wall filler in the center section of the building as designated on Figure 1. Removal shall be within a full containment. See Section 02081 for additional work practices.

II. Miscellaneous Materials

- A. Caulking. Remove and dispose of asbestos-containing gray, black, and white caulking at windows and doors throughout the building identified in the asbestos survey report. Polyethylene sheets or other resilient drop cloths or tarps shall be placed on the surfaces inside and outside the base of each component prior to the start of caulking removal. The dimensions of each drop cloth shall be large enough to catch pieces of caulking that may fall or be dislodged from the component during removal and handling. See Section 2081 for additional work practices.
- B. Roofing Materials. Remove and dispose of asbestos-containing roofing materials identified in the asbestos survey report. This material should be removed intact as a non-regulated, non-friable material. See Section 02081 for additional work practices.

III. Non-Asbestos Materials

A. Non-ACM materials such as ceiling tile may be removed to access ACM. These materials may be disposed of as construction waste. Waste shall be containerized and promptly disposed of offsite.

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SUMMARY OF WORK

The Work includes removal and disposal of ACM and non-ACM designated above and on Figure A1. The Work shall be conducted and techniques utilized as specified in the documents.

Contractor will provide, erect and maintain all barricades, traffic control devices, hand railings, toe boards, safety devices, scaffolds, safety measures and security measures necessary for the protection of the Contractor's employees, Owner, Designer, and Air Monitoring Firm until the completion of work specified under this Agreement. Safety devices removed during abatement (handrails, flooring, etc.) must be corrected, reinstalled, or demarcated to prevent safety issues.

Negative pressure and a full containment shall be established during all regulated removal activities. Manometer readings are required during the entire project. Readings may be a continuous strip or documented in writing by the Abatement Contractor at each location at least four times per 8-hour work shift.

Asbestos containing material found to extend from the designated areas into, through, above, or below walls, ceilings, roofs or other barriers is also included in this specification. The Contractor is responsible for verifying quantities and locations of asbestos containing materials at this facility. The Contractor will refer to Section 02081 for specified procedures pertaining to Work Area designations.

General and Administrative: Requirements are set forth in the following specification sections:

- 01013 Summary of the Work Asbestos Abatement
- 01043 Project Coordination Asbestos Abatement
- 01091 Definitions, Codes, Regulations and Standards Asbestos Abatement

Abatement Work: Requirements are set forth in the following specification sections, listed here according to the sequence of the Work:

- 01091 Definitions, Codes, Regulations and Standards Asbestos Abatement
- 01410 Air Monitoring
- 01503 Temporary Facilities Asbestos Abatement
- 01513 Exhaust Ventilation System
- 01560 Worker Protection Asbestos Abatement
- 01562 Respiratory Protection
- 01563 Decontamination Units

Asbestos Removal Work: Procedures are described in the following specification sections:

- 02081 Removal of Asbestos Containing Materials
- 02084 Disposal of Asbestos Containing Materials
- 09805 Lock Down Procedures

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POTENTIAL HAZARDS

The disturbance or dislocation of asbestos materials may cause asbestos fibers to be released into the building's atmosphere, thereby creating a potential health hazard to workers and building occupants.

Apprise all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures which must be followed.

Where in the performance of the Work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified asbestos-containing materials, take appropriate continuous measures as necessary to protect staff and occupants of Greenville Technical College (including buildings adjacent to the site) from the potential hazard of exposure to airborne asbestos. Such measures will include the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

ASBESTOS-CONTAINING MATERIALS

The known asbestos-containing materials to be removed are identified in the asbestos inspection report. The Contractor is responsible for verifying all existing conditions and quantities at these facilities.

OWNER OCCUPANCY

Partial Owner Occupancy: The Owner reserves the right to place and install equipment as necessary in areas of the buildings in which asbestos abatement and project decontamination procedures have been completed, and to occupy such completed areas prior to substantial completion, provided that such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the Work or any part of the Work.

PROTECTION OF EXISTING ITEMS

Contractor shall be responsible for maintaining furnishings, driveways, and equipment not specified for removal and disposal. Damage to furnishings or equipment during construction activities shall be restored to existing condition or better at the expense of the Contractor. The Owner will provide the Contractor a written list of salvaged items (if any) and a storage location for items to be moved and turned over. The Contractor is responsible for removing these items without damage and transporting to the designated storage location onsite.

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AIR MONITORING

The Owner will contract a firm to provided area air monitoring prior to, during, and after abatement of materials by the Contractor. The Contractor is responsible for OSHA compliance monitoring. The Owner's air monitoring firm WILL NOT analyze samples for Contractor's OSHA compliance.

Samples must be analyzed by an American Industrial Hygiene Association (AIHA) accredited laboratory. When fiber counting is performed onsite, the analyst must be proficient in AIHA's Asbestos Analysts Registry (AAR) program or in the company's laboratory which must be proficient in AIHA's Proficiency Analytical Testing (PAT) program. The Air Monitoring Firm shall also have in place a quality assurance program for the analysis of samples during abatement.

The role of the Air Monitoring Firm is to act as the Owners onsite representative and it will communicate with the Owner and Designer as to compliance with applicable regulations and written specifications. The Air Monitoring Firm shall be prepared to enter regulated areas to verify Contractor's work practices at any time during the project as well as perform verification on containment construction and work practices during and at critical junctures throughout the project.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION (Not applicable)

END OF SECTION

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SECTION 01043 - PROJECT COORDINATION - ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF WORK:

Minimum administrative and supervisory requirements necessary for coordination of Work on the project include but are not necessarily limited to the following:

Administrative and supervisory personnel Special reports

ADMINISTRATIVE AND SUPERVISORY PERSONNEL:

General Superintendent: Maintain a full-time General Superintendent who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the Competent Person as required by OSHA in 29 CFR 1926 for the Contractor and is the Contractor's representative responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos containing materials. This person should have completed a course at an EPA Training Center or equivalent certificate course in asbestos abatement procedures, have had a minimum of five years on-the-job training and meet any additional requirements set forth in 29 CFR 1926 for a Competent Person. The General Superintendent must have had responsible charge of a minimum of three (3) asbestos abatement projects similar in size and type to the work of this contract.

Head Foreman: Maintain one Head Foreman experienced in supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person shall have not less than five years of full-time experience in responsible charge of asbestos removal operations similar in scope and magnitude to this project. Head Foreman must remain onsite at all times the Work is in progress.

Crew Leader: For every ten asbestos removal workers (laborers) utilized on this project, provide one experienced AHERA accredited Supervisor having three years minimum experience in successful asbestos removal operations similar in scope and magnitude to this Project. A minimum of one crew leader is required to remain inside EACH work area at all times the Work is in progress.

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COORDINATION:

Coordinate construction operations and scheduling with partial occupancy requirements of the Owner and the Owner's use of utilities.

Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly completion of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.

An initial progress meeting, recognized as "Pre-Construction Meeting" will be convened by the Owners representative prior to start of any work. The preconstruction meeting will be scheduled before start of construction, at a time convenient to the Owner and the Owners Representative, but no later than 15 days after execution of the Agreement. Meet at the project site, or as otherwise directed, with General Superintendent, Owner, Designer, Project Administrator, and other entities concerned with the asbestos abatement work.

SPECIAL REPORTS:

General: Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Designer and others affected by occurrence.

Reporting Unusual Events and Inspections by Regulatory Officials: When an event of unusual and significant nature occurs or inspection by an outside party, etc. prepare and submit a special report listing chain of events, persons participating, response by Contractors' personnel, evaluation of results or effects, and similar pertinent information. When such events are predictable, advise Owner at earliest possible date. In the event of inspections by regulatory officials the contractor shall contact the Owner and Designer immediately.

Reporting Accidents: Prepare and submit reports of accidents, at site and anywhere else Work is in progress. Record and document data and action; comply with industry standards. For this purpose, an accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event poses a significant threat of loss or personal injury.

Pre-Construction Inspection: Inspect areas in which work will be performed, prior to commencement of work. Prepare a listing of damage to structure, surfaces, equipment or of surrounding properties which could be misconstrued as damage resulting from the work. Photograph or videotape existing conditions (with permission from the Owner) as necessary to document conditions. Submit to Owner/Designer for record purposes prior to starting work.

Contingency Plan: Prepare a contingency plan for emergencies including fire, accident, power failure, negative air system failure, supplied air system failure, or any other event that may require modification or abridgement of decontamination or Work Area isolation procedures. Include in

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plan specific procedures for decontamination or Work Area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

Project Directory: Develop a directory of all entities involved in the project. Post copies of the Project Directory in the temporary field office. Include the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site. Identify individuals, their duties and responsibilities. List business name, contact person, normal business and emergency telephone, mobile phone numbers and addresses of:

- 1. Owner, Designer, and Project Administrator
- 2. Contractor's General Superintendent, supervisory personnel and Contractor's home office
- 3. Emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company.
- 4. Local, state, and federal agencies with jurisdiction over the project.

Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule. Submit to the Owner and Designer 10 days prior to the date established for "Commencement of the Work." Work will not commence until a written schedule is submitted.

Progress Meetings: In addition to specific coordination and pre-installation meetings for each element of work, and other regular project meetings held for other purposes, the Contractor shall hold general progress meetings as required. Meetings shall be every two weeks at a minimum. Representatives of the Owner will attend these meetings. In addition to representatives of the Contractor, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the work. The Contractor shall prepare meeting minutes and distribute to the attendees within 48 hours of the meeting.

General Work Plan: The contractor shall develop a written work plan to define work areas, anticipated decontamination/loadout unit locations, and waste container location prior to mobilization to the site. Submit to the Owner and Designer 10 days prior to mobilization.

SUBMITTALS:

Refer to Section 01300 for specific details on these required submittals.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION



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SECTION 01091 - DEFINITIONS, CODES, REGULATIONS AND STANDARDS-ASBESTOS ABATEMENT

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DEFINITIONS:

Adequately Wet: To sufficiently mix or penetrate with liquid to prevent the potential release of particulates.

Aerosol: A system consisting of particles, solids or liquids, suspended in air.

Airlock: System for permitting ingress and egress without permitting air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways protected by two overlapping polyethylene sheets and separated by a sufficient distance such that one passes through one doorway into the chamber, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway. The airlock maintains a pressure differential between the contaminated and uncontaminated areas thereby further minimizing flow-through contamination.

Air Monitoring: The process of measuring the fiber content of a specific volume of air.

Amended Water: Water to which a surfactant has been added.

Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthopyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.

Asbestos-Containing Material (ACM): Any material containing more than 1 percent by weight of asbestos of any type or mixture of types.

Asbestos-Containing Waste Material: Any material which is or is suspected of being or any material contaminated with an asbestos-containing material which is to be removed from a Work Area for disposal.

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Authorized Visitor: The Owner, the Designer, or a representative of any federal, state and local regulatory or other agency having authority over the project.

Barrier: Any surface that seals off the Work Area to inhibit the movement of fibers.

Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 inches to 9 inches.

Category I nonfriable asbestos-containing material (ACM): Nonfriable asbestos or nonfriable asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos.

Category II nonfriable ACM: Any material other than packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos that cannot, when dry be crumbled, pulverized, or reduced to powder by the force expected to act upon it in the course of demolition or renovation operations.

Certified Industrial Hygienist (C.I.H.): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Clean Room: An uncontaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment. Also known as the "Change Room."

Clearance monitoring: Area air sampling performed using aggressive clearance sampling techniques to determine the airborne concentrations of residual fibers upon conclusion of asbestos abatement.

Curtained Doorway: A device to allow ingress and egress from one room to another while minimizing air movement between the rooms. Typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway and securing each along the top of the doorway, with the vertical edge of one along one vertical side of the doorway, and the vertical edge of the other along the opposite vertical side. Two curtained doorways spaced a minimum of three feet apart for an airlock.

Decontamination Enclosure System: A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers or of materials and equipment. A decontamination enclosure system always contains an airlock.

Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operation.

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Disposal Bag: Six mil thick leak-tight plastic bags used for transporting asbestos waste from Work Area to disposal site.

Each is labeled as follows:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

and

R.Q. – ASBESTOS 9 – NA2212 – PG III

and

Name of Waste Generator: (Name of Contractor and Owner)

Location of Waste Generated:

Encapsulation: A form of abatement involving the treatment of regulated asbestos-containing material (RACM) with a liquid which covers the surface with a protective coating (bridging) or embeds fibers in an adhesive matrix (penetrating) to prevent the release of asbestos fibers.

Enclosure: The construction of an airtight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.

Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically consisting of a designated area of the Work Area, a washroom, and an uncontaminated area.

Equipment Room: A contaminated area or room which is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment.

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Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

Friable Asbestos-containing Material: Any material that when dry can be or has been crumbled, pulverized, or reduced to powder, and contains more than 1 percent asbestos.

Glovebag: A single use sack (typically constructed of 6 mil transparent polyethylene or polyvinylchloride plastic) with two inward projecting long sleeve gloves, which are designed to enclose an object from which an asbestos-containing material is to be removed.

Grind: To reduce to powder or small fragments. Grinding includes mechanical chipping or drilling.

HEPA Filter: A High Efficiency Particulate Absolute (HEPA) filter capable of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns in length.

HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High Efficiency Particulate Absolute filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97 percent efficiency for retaining fibers of 0.3 microns or larger.

Holding Area: A chamber between the washroom and uncontaminated area in the equipment decontamination enclosure system. The holding area constitutes an airlock.

Local Exhaust Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a negative pressure inside the Work Area and a constant air flow from adjacent areas into the Work Area and exhausting that air outside the Work Area.

Lockdown: A procedure whereby the surface of the Work Area is coated with latex paint or other suitable sealant, using an airless sprayer, after final visual clearance from the Air Monitoring Firm, Designer or Owner, to fix in place and render non-friable, any traces of asbestos material that may remain.

Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (Work Area).

Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

Owner/Operator: Any person or contractor who owns, leases, operates, controls, or supervises a facility being demolished or renovated, or any person who operates, controls, or supervises the demolition or renovation operation, or both.

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Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.

Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer. Regulated Asbestos-Containing Material (RACM): (a) Friable asbestos-containing material; (b) Category I nonfriable ACM that has become friable; (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or (d) Category II nonfriable ACM that is likely to become or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Removal: The act of removing asbestos-containing or contaminated materials from a structure and depositing in a suitable disposal site.

Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

Shower Room: A room constituting an airlock, between the clean room and the equipment room in the worker decontamination enclosure system, with hot and cold or warm running water suitably arranged for complete showering during decontamination.

Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

Testing Laboratory: The term "testing laboratory" is defined as an independent entity engaged to perform specific inspections or tests of the work, either at project site or elsewhere; and to report results of those inspections or tests.

Time Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.

Washroom: A room between the Work Area and the holding area in the equipment decontamination enclosure system. The washroom constitutes an airlock.

Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area: The area(s) where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work Area is a Regulated Area as defined by 29 CFR 1926.1101.

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CODES, REGULATIONS, AND STANDARDS:

General Applicability of Codes, Regulations, and Standards: Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, all applicable codes, regulations, and standards have the same force and effect and are made a part of the contract documents by reference as if copied directly into the contract documents, or as if published copies are bound herewith.

Contractor Responsibility: The Contractor shall assume full responsibility and liability for the compliance with all applicable federal, state and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable federal, state, and local regulations. The Contractor shall hold the Owner and Designer harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees, or his subcontractors.

Federal Requirements: Which govern asbestos abatement work or hauling and disposal of asbestos waste materials include but are not limited to the following:

U.S. Department of Labor, Occupation Safety and Health Administration, (OSHA), including but not limited to:

Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules Title 29, Part 1910, Section 1001 and Part 1926, Section 1101 of the Code of Federal Regulations

Respiratory Protection Title 29, Part 1910, Section 134 of the Code of Federal Regulations

Construction Industry
Title 29, Part 1926, of the
Code of Federal Regulations
Access of Employee Exposure and Medical Records
Title 29, Part 1910, Section 120 of the
Code of Federal Regulations

Asbestos Hazard Emergency Response Act 40 CFR Part 763 (The Final Rule)

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Hazard Communication
Title 29, Part 1910, Section 1200 of the
Code of Federal Regulations
Specifications for Accident Prevention Signs and Tags
Title 29, Part 1910, Section 145 of the
Code of Federal Regulations

U. S. Environmental Protection Agency (EPA) including but not limited to:

Asbestos Abatement Projects Rule 40 CFR Part 762 CPTS 62044, FRL 2843-9 Federal Register, Vol 50 No 134, July 12, 1985 P28530-28540

Regulation for Asbestos Title 40, Part 61, Sub-part A of the Code of Federal Regulations

National Emission Standard for Asbestos Title 40, Part 61, Sub-part M (Revised Sub-part B) of the Code of Federal Regulations

EPA Guidance Documents: which discuss asbestos abatement work or hauling and disposal of asbestos waste materials are listed below for the contractor's information only. These documents do not describe the Work and are not a part of the Work of this contract. EPA maintains an information number (800) 334-8571; publications can be ordered from (800) 424-9065 in Washington, DC):

Asbestos-Containing Materials in School Buildings - A Guidance Document. Parts 1 & 2. (Orange Books) EPA C00090 (out of print)

Friable Asbestos-Containing Materials in Schools: Identification and Notification Rule (40 CFR Part 763).

Evaluation of the EPA Asbestos-in-Schools Identification and Notification Rule. EPA 560/5-84-006.

Asbestos in Buildings: National Survey of Asbestos-Containing Friable Materials. EPA 560/5-84-006.

Asbestos in Buildings: Guidance for Service and Maintenance Personnel. EPA 560/5-85-018.

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Asbestos Waste Management Guidance. EPA 530-SW-85-007.

Asbestos Fact Book. EPA Office of Public Affairs.

State Requirements: South Carolina Department of Health and Environmental Control (SCDHEC) Regulation 61-86.1 Standards of Performance for Asbestos Projects. Abide by all state rules, regulations, ordinances, etc. which govern the specified asbestos abatement work, licensing or hauling and disposal of asbestos waste material.

Local Requirements: Abide by all local rules, regulations, ordinances, etc. which govern the specified asbestos abatement work, licensing, or hauling and disposal of asbestos waste removal.

Industry Recognized Standards

"Managing Asbestos in Buildings: A Guide for Owners and Managers" – A revision to the USEPA 1985 document "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 560/5-85-024) known as the purple book.

END OF SECTION

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SECTION 1300 - SUBMITTALS

PART 1 - GENERAL

RELATED DOCUMENTS

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF WORK

General: The required submittals are identified in this section and/or elsewhere in the Specification. Make submittals to the Owner in a timely manner and at appropriate times in the execution of the Work to allow for sufficient and prompt review by the Owner. Removal work will not commence until submittals are received by the Owner and/or Designer. Revise and resubmit as necessary.

Submittals as required in the Contract Documents shall be submitted in electronic format (PDF). Submit complete sets to the Owner and/or Designer for his review of "Pre-Job Submittals" on or before the date of the pre-construction meeting. The Work may not proceed until the complete pre-job submittal package has been reviewed and approved by the Owner and/or Designer.

Submit complete sets to the Designer for his review of "Post-Job Submittals" following the final completion of the Work. Request for final payment will not be approved until the post-job submittal package has been reviewed by the Owner and/or Designer.

Identify individual submittals by name and include a table of contents in each submittal package.

Pre-Job Submittals.

1. Permits: Permits required for the removal, encapsulation, handling of asbestos containing materials, and general contracting will be obtained by the Contractor.

The Contractor shall obtain all permits required by state and/or local regulatory agencies or jurisdictions for the transportation and disposal of asbestos containing waste.

Post one copy of all permits at the Work site. Keep on file in the Contractor's office one copy of each and provide a current copy of each to the Owner.

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2. Submit complete information relative to the following:

Submit a copy of the completed Asbestos Removal Notice Form.

Submit South Carolina Licenses for all workers and supervisors participating on the project.

Submit names of Supervisory personnel including superintendent, head foreman, crew leader(s), and workers and their qualifications and training including:

Individually signed Respiratory Training Form or equivalent for each worker to be utilized on the project.

Individually signed Certificates of Worker Training or equivalent for each worker to be utilized on the project.

Contractor's affidavit that all Contractor's employees on this project have successfully completed medical surveillance as required by 29 CFR 1926 and the statement by a medical doctor.

Hazardous Waste Management Plan.

For each Work Area, submit a plan of action: Submit a detailed plan of the procedures proposed for use in complying with the requirements of this specification. Include in the abatement plan, a contingency emergency plan, the location and layout of the de-contamination areas, the sequencing of asbestos work, methods to be used to assure the safety of site visitors, disposal plan, including location of approved disposal site, and a detailed description of the methods to be used to control pollution and ensure site security. Expand upon the use of portable HEPA ventilation systems, closing out of the building's HVAC system, method of removal to prevent visible emissions from the Work Area, and packaging of removed asbestos debris. Include sequencing and schedule for installation of architectural finishes/materials. The plan must be approved by the Designer prior to commencement of Work.

Submittals During the Work and Post Job Submittals: All submittals must be turned over to the Owner and/or Designer as outlined below.

- 1. Revise and submit progress schedule as needed.
- 2. Submit training certificates for all new or additional employees before their assignment to the project.

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- 3. A copy of daily security, worker, and visitor log signed by the superintendent on a weekly basis.
- 4. Static pressure differential records on a weekly basis.
- 5. Submit a copy of employee air monitoring results relative to OSHA respiratory protection level compliance on a weekly basis.
- 6. Transport manifests and landfill receipts as they are received.
- 7. Post-job submittals must be turned over to the Owner and/or Designer no later than ten working days after completion of Work and prior to the final request for payment.

Submittals for Air Monitoring Firm:

- 1. Submit required information outlined in Section 01410 to the Designer.
- 2. Prior to mobilization submit the following to the Owner and/or Designer: SCDHEC license, AIHA AAR/PAT letter of proficiency, firm's QA program, and equipment calibration certificates.
- 3. On a weekly basis submit air sample analysis, QA data (reference counts, recounts, and microscope calibration checks) and daily field notes to the Owner and/or Designer.
- 4. At the conclusion of the project submit a summary report of the air monitoring activities to the Owner and/or Designer no later than ten working days after completion of Work and prior to the final request for payment.

PART 2 - PRODUCTS

MANUFACTURER'S LITERATURE:

Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, clearly show which portions of the contents is being submitted for review.

Submit an electronic copy to Owner and/or Designer for their review and file.

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PART 3 - EXECUTION

QUALITY ASSURANCE:

Coordination of Submittals

Carefully review all aspects of each item being submitted.

Verify that each item and its appropriate submittals conform in all respects with the specified requirements.

Certify, by affixing signature of Contractor's authorized representative to the corner of each submittal package, that this coordination has taken place.

IDENTIFICATION OF SUBMITTALS:

Number consecutively and clearly identify all submittals. Show identification information on at least the first page of each submittal and elsewhere as necessary for positive identification of submittal.

Accompany each submittal package with a letter of transmittal showing all information required for identification and checking.

GROUPING OF SUBMITTALS:

Group submittals into packages identified as "Pre-Job Submittals" and "Post-Job Submittals".

Partial submittals may be rejected for noncompliance with the Contract Documents.

TIMING OF SUBMITTALS:

Make submittals far enough in advance of scheduled dates for commencement, execution or installation to provide time required for review, for securing necessary approvals, for possible revisions and resubmittals and for placing orders and securing delivery.

The Owner and/or Designer will use his best efforts to review submittals within three days of receipt of submittals.

Contractor will be held responsible for delays occasioned by in-complete submittals packages.

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OWNER/DESIGNER'S REVIEW:

Review by the Owner and/or Designer does not relieve the Contractor from responsibility for errors which may exist in the submitted data. The Contractor will be solely responsible for the means, methods, techniques, sequences, and procedures involved in the execution of the Work.

Make revisions as required by the Owner and/or Designer and resubmit for approval.

END OF SECTION

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SECTION 01410 - AIR MONITORING

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF THE WORK:

For this project, the Owner will select an Air Monitoring Firm. This section describes air monitoring carried out by the Air Monitoring Firm to verify that the outside environment remain uncontaminated. This section also sets forth airborne fiber levels outside the Work Area as action levels, and describes the action required by the Contractor if an action level is met or exceeded.

Air monitoring required by OSHA is the responsibility of the Contractor and is not covered in this section. Owner will not be performing air monitoring to meet these requirements. Owner's third-party air monitor will not analyze air samples collected by Contractor.

AIR MONITORING QUALIFICATIONS:

The following is required of the onsite air monitor for this project:

- A. Have a current SCDHEC license for air monitoring.
- B. The onsite analyst shall be proficient in AIHA's Asbestos Analysts Registry (AAR) program and submit evidence to the Owner. If samples are not analyzed onsite the Air Monitoring Firm's laboratory shall be proficient in AIHA's PAT program.
- C. Submittal of firms Quality Assurance program to meet the requirements of NIOSH Method 7400, Asbestos and Other Fibers by PCM.
- D. Submit current calibration certificates for air calibration devices used onsite.
- E. Have at least 90 days of onsite experience monitoring asbestos abatement projects.

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AIR MONITORING:

- A. Work Area Isolation: A function of the Air Monitoring Firm will be to detect faults in the Work Area isolation such as:
 - 1. Failure of filtration or rupture in the local exhaust system,
 - 2. Contamination of the exterior of the building with airborne asbestos fibers.
- B. Should any of the above occur, the Contractor shall immediately cease asbestos abatement activities until the fault is corrected. Work shall not recommence until authorized by the Designer.
- C. Work Area Airborne Fiber Count: The Air Monitoring Firm will monitor airborne fiber counts in the Work Area. The purpose of this air monitoring will be to detect airborne fiber counts which may significantly challenge the ability of the Work Area isolation procedures to protect the outside of the building from contamination by airborne fibers.
- D. Work Area Clearance: To determine if the elevated airborne fiber counts encountered during abatement operations have been reduced to an acceptable level, the Air Monitoring Firm will sample and analyze air as specified other sections.
- E. The Air Monitoring Firm will be conducting air monitoring during the course of the project and shall be physically onsite during active collection of samples to maintain sample integrity and provide work practice observations to the Owner and Designer.

ANALYTICAL METHODS:

All daily area air samples will be analyzed by phase contrast microscopy (PCM) using NIOSH, 7400 Method. Clearance samples for work areas applicable to SCDHEC R. 61-86.1 shall be analyzed by Transmission Electron Microscopy in accordance with 40 CFR 763.

SCHEDULING:

- A. Testing by the Air Monitoring Firm shall be performed in areas and at times during the Work as deemed necessary by the Designer or as specified in the Contract Documents.
- B. Unless otherwise approved by the Designer, Contractor shall schedule final testing at least twenty-four hours prior to desired time of testing. Notification shall be made to the Designer, Owner, and Air Monitoring Firm in writing.

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- C. Unless otherwise approved by the Designer, Contractor shall notify the Designer 72 hours prior to variations in the originally scheduled work hours, in order to receive approval from the Designer and Owner to arrange proper testing services.
- D. Coordinate other scheduling with Designer as necessary.

RESULTS:

- A. All testing and analysis will be performed promptly and results issued expeditiously in order to minimize any possible delay in the progress of the Work.
- B. Test results will be available to Owner, Designer, and Contractor as follows:
 - 1. Air sample results by Phase Contrast Microscopy: 24 hours from sample extraction time.
 - 2. Air sample clearance results by Transmission Electron Microscopy: 24 hours from sample receipt at the laboratory.
 - 3. Results of other tests deemed necessary by Designer: as quickly as possible but not later than three days following completion of test(s) and receipt of results.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

SCHEDULE OF AIR SAMPLES:

General: The number and volume of air samples will be in accordance with the following schedule:

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Before Start of Work:

The Air Monitoring Firm will secure the following Air Samples to establish a baseline before start of Work.

| Location Sampled | Number of Samples | Analytical Method | Minimum Volume (L) | Flow Rate (LPM) |
|-----------------------------|-------------------------|----------------------|--------------------------|-----------------------|
| Within each Work Area | 5 | NIOSH 7400 | 1200 | 3.0-12.0 |
| & adjacent to the work area | 3 | 1110311 /400 | 1200 | 3.0-12.0 |

From start of Work through the project decontamination, the Air Monitoring Firm will conduct representative daily samples inside and outside each work area as described in SCDHEC R. 61-86.1. Each air exhaust from containments shall be measured daily.

| Location Sampled | Number of Samples | Analytical Method | Flow Rate (LPM) |
|-----------------------------------|-------------------|----------------------|-----------------------|
| Inside &Outside Each Work Area | 4-6 | NIOSH 7400 | 3.0-12.0 |

If airborne fiber counts exceed 0.1 f/cc in contained work areas, additional samples will be taken as necessary to monitor fiber levels.

If any air samples taken outside of the Work Area exceeds the 0.01 f/cc then Contractor will be required to immediately and automatically stop all Work and take remedial action. The Owner and Designer shall be notified immediately.

PERSONNEL MONITORING:

Contractor shall be responsible for OSHA air monitoring requirements. Contractor's OSHA monitoring shall be analyzed by an independent laboratory. Owner's third-party air monitor will not analyze air samples collected by Contractor. The contractor shall submit results of the monitoring to the Designer on a weekly basis.

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FINAL INSPECTIONS AND CLEARANCE TESTING

See section 02081.

REPORTING

At the completion of the project, the air monitoring firm shall prepare a report describing the assessment of the project, all air monitoring data, acceptance letters, calibration records, quality assurance documentation referenced in NIOSH 7400, and a description of the project as it proceeded to completion and submit an electronic copy of the report to the Designer.

END OF SECTION

State Project No. H59-N834-JM Greenville – Building 502 Demolition November 29, 2017 Section 01503

SECTION 01503 - TEMPORARY FACILITIES

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF REQUIREMENTS:

General: Provide temporary connection to existing building utilities or provide temporary facilities as required herein or as necessary to carry out the Work.

PART 2 - PRODUCTS

MATERIALS AND EQUIPMENT:

General: Provide new or used materials and equipment that are undamaged and in serviceable condition. Provide only material and equipment that is recognized as being suitable for the intended use, and is in compliance with appropriate standards.

WATER SERVICE:

- A. Temporary Water Service Connection: All connections to the Owner's water system shall include backflow protection.
- B. Water Hoses: Employ hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water into each area and to each Decontamination Unit.
- C. Hot Water: Hot water is not available from Owner. Contractor will provide necessary water heating equipment.
- D. Relocate, modify and extend services and facilities as required during the course of Work so as to accommodate the entire Work of the project.

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ELECTRICAL SERVICE:

- A. General: Provide a weatherproof, grounded temporary power service and distribution system of sufficient size, capacity, and power characteristic to accommodate performance of Work during the construction period. An electrical ground fault circuit interrupter shall be utilized between the power source and the site of containment usage. Install temporary lighting adequate to provide sufficient illumination for safe work and traffic conditions in every area of Work. Contractor may use existing electrical service with permission from the Owner. If power is unavailable from Owner, Contractor shall provide power source.
- B. Power Distribution System: Provide circuits of adequate size and proper characteristics for each use. In general, run wiring overhead and rise vertically where wiring will be least exposed to damage from construction operations.

SCAFFOLDING:

Provide scaffolding, ladders and/or staging, etc. as necessary to accomplish the work of this contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of scaffolding shall comply with applicable OSHA provisions.

FIRE EXTINGUISHERS:

Fire Extinguisher: Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each Work Area. Provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.

TEMPORARY STRUCTURES:

A. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material. Separate handwashing facilities shall also be provided.

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PART 3 - EXECUTION

INSTALLATION, GENERAL

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required. Installation shall be in compliance with manufactures instructions, OSHA, NFPA, and/or NEC.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of permanent facilities.

END OF SECTION

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SECTION 01513 - EXHAUST VENTILATION SYSTEM

PART 1 - GENERAL

RELATED DOCUMENTS:

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

PART 2 - PRODUCTS

EXHAUST MACHINES:

Supply the required number of HEPA filtered fan units to the site in accordance with these specifications. Use units that are manufactured and have appropriate UL and efficiency testing. Units that appear to be damaged shall be removed from service immediately. Units shall have a three stage filtration process; first-stage low efficiency for particles 100 μ m and larger, second-stage filter for particles down to 5 μ m, and the final stage filter (HEPA) capable of removing 99.99% particles at 0.3 μ m or larger.

PART 3 - EXECUTION

GENERAL:

A static negative air pressure of at least -0.02 inches water column shall be maintained at all times in the Work Area enclosure to ensure that contaminated air does not enter non-contaminated areas. Contractor is responsible for all patent requirements related to exhaust and shall provide a continuously operating **manometer** with alarm to measure static pressure differential. The negative air pressure shall be monitored by an employee of the Contractor or their delegate to prevent loss of negative pressure. Record the manometer readings four times throughout the 8-hour work shift at a minimum. Submit readings as Specified in Section 1300, Submittals.

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PREPARATION OF THE WORK AREA:

- A. Determining the Ventilation Requirements: Provide fully operational local exhaust systems supplying a minimum of one air change every 15 minutes. Determine the volume in cubic feet of the Work Area by multiplying floor area by ceiling height. Determine total ventilation requirement in cubic feet per minute (cfm) for the Work Area by dividing this volume by the air change rate.
- B. Ventilation Required (CFM) = Volume of Work Area (cu. ft.)/15 min. Determine Number of Units needed to achieve 15 minute change rate by dividing the ventilation requirement (CFM) above by capacity of exhaust unit(s) used. Capacity of a unit for purposes of this section is the capacity in cubic feet per minute with fully loaded filters in the machines labeled operating characteristics. Number of Units Needed = Ventilation Requirement (CFM)/ Capacity of Unit with Loaded Filters (CFM).
- C. Add one additional unit as a backup in case of equipment failure or machine shutdown for filter changing.
- D. Location of Exhaust Units: Locate exhaust unit(s) so that makeup air enters Work Area primarily through decontamination facilities and traverses Work Area as much as possible. This may be accomplished by positioning the exhaust unit(s) at a minimum distance from the worker access opening or other makeup air sources.
- E. Place End of Unit or its exhaust duct through an opening in the plastic barrier or wall covering. The plastic around the unit or duct shall then be sealed with tape and caulk as required.
- F. Vent Exhaust Units to the exterior away from occupied areas unless otherwise authorized in writing by the Designer.

USE OF THE LOCAL EXHAUST SYSTEM:

- A. General: Each unit shall be serviced by a dedicated minimum 115V-20A circuit, or voltage and amperage specified by the manufacturer.
- B. Testing the System: Test local exhaust system before any asbestos-containing material is wetted or removed. After the Work Area has been prepared, the decontamination facility set up, and the exhaust unit(s) installed, start the unit(s) one at a time.
- C. Demonstrate Operation of the local exhaust system to the Air Monitoring Firm and/or Designer including, but not be limited to, the following:

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- a. Plastic barriers and sheeting move lightly in toward Work Area,
- b. Curtain of decontamination units move lightly in toward Work Area,
- c. There is a noticeable movement of air through the decontamination unit. Use smoke tube to demonstrate air movement from Clean Room to Shower Room, from Shower Room to Equipment Room, and from Equipment Room to Work Area.
- d. Use smoke tubes to demonstrate a positive motion of air across all areas in which Work is to be performed.
- D. Start exhaust units before beginning Work (before any asbestos-containing material is disturbed). If more than one unit is installed, they should be turned on one at a time, checking the integrity of wall barriers for secure attachment and need for additional support. After abatement work has begun, run units continuously to maintain a constant negative pressure until decontamination of the Work Area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop. Do not shut down local exhaust system during lockdown procedures, unless authorized by the Designer in writing.
- E. If an electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and all exhaust units are operating again. At completion of abatement work, allow exhaust units to run as specified under Section 02081, to remove airborne fibers that may have been a generated during abatement work and cleanup and purge the Work Area with clean makeup air. The units may be required to run for a longer time after decontamination, if dry or only partially wetted asbestos material was encountered during any abatement work.
- F. Perform shutdown dismantling of the local exhaust system in accordance with procedures outlined in Section 02081- Removal of Asbestos-Containing Materials.

END OF SECTION

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SECTION 01560 - WORKER PROTECTION

PART 1 - GENERAL

RELATED DOCUMENT:

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF WORK:

This section describes the equipment and procedures required for protecting workers against asbestos contamination and other work place hazards except for respiratory.

RELATED WORK SPECIFIED ELSEWHERE:

Respiratory Protection is specified in Section 01562.

WORKER TRAINING:

Train, in accordance with 29 CFR 1926.1101, 40 CFR 763, and SCDHEC R. 61-86.1, all workers in the dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures. Include but do not limit the topics covered in the course to the following:

Methods of recognizing asbestos.

Health effects associated with asbestos.

Relationship between smoking and asbestos in producing lung cancer.

Nature of operations that could result in exposure to asbestos.

Importance of and instruction in the use of necessary protective controls, practices and procedures to minimize exposure including:

- -- Engineering controls
- -- Work practices
- -- Respirators

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- -- Housekeeping procedures
- -- Hygiene facilities
- -- Protective clothing
- -- Decontamination procedures
- -- Emergency procedures
- -- Waste disposal procedures
- -- Purpose, proper use, fitting, instructions, and limitations of respirators as required by 29 CFR 1910.134
- -- Appropriate work practices for the Work
- -- Requirements of medical surveillance program
- -- Review of 29 CFR 1926
- -- Exhaust ventilation systems
- Work practices including hands on or on-job training
- -- Personal decontamination procedures
- -- Air monitoring, personnel and area

MEDICAL SURVEILLANCE:

Provide a medical surveillance program and physician's opinion before a respirator is assigned as required by 29 CFR 1910.134 and 29 CFR 1926.103(e)(10). In addition, require that the physician provide an evaluation of the individual's ability to work in environments capable of producing heat stress in the worker.

PART 2 - EQUIPMENT

PROTECTIVE CLOTHING:

- A. Coveralls: Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in the Work Area. Provide a sufficient number for all required changes, for all workers in the Work Area.
- B. Hard Hats: Provide head protection (hard hats) as required by OSHA for all workers. Require hard hats to be worn at all times that Work is in progress that may potentially cause head injury. Provide hard hats of type with plastic strap type suspension. Require hats to remain in the Work Area throughout the Work. Thoroughly clean, decontaminate and bag hats before removing them from the Work Area at the end of the Work.
- C. Footwear: Provide foot covers and footwear with non-skid soles, and where required by OSHA, foot protection for all workers. Do not allow this footwear to be removed from the Work Area for any reason other than disposal of contaminated waste or transfer to another asbestos Work Area.

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- D. Goggles: Provide eye protection (goggles) as required by OSHA for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury. Goggles will not be worn with full face respirators.
- E. Gloves: Provide work gloves.

ADDITIONAL PROTECTIVE EQUIPMENT:

Disposable coveralls, head covers, and footwear covers, and PAPR respiratory protection shall be provided by the Contractor for the Owner, Designer, and other authorized representatives who may inspect the job site.

Provide all workers with appropriate tool tethers to prevent injury to workers below.

PART 3 - EXECUTION

GENERAL:

Contractor shall assume sole responsibility and provide worker protection as required by the most stringent OSHA standards applicable to the Work.

Each time the Work Area is entered, all workers shall wear a disposable whole body suit. The worker may wear this suit over their street cloths during non-friable removals.

DECONTAMINATION PROCEDURES:

Require all workers to adhere to the following personal decontamination procedures at a minimum whenever they leave the Work Area:

Regulated removals utilizing a full decontamination unit:

- When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.
- Still wearing respirators, proceed to showers. Showering is mandatory. Thoroughly wet body. Remove respirator and dispose of filter properly. Carefully wash respirator facepiece. Shower completely with soap and water. Rinse shower walls and floor prior to exit.
- Proceed from shower to changing room and change into street clothes or into new disposable work items.

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WITHIN WORK AREA:

Workers MAY NOT eat, drink, smoke, apply cosmetics, chew gum or use tobacco products in the Work Area. To eat, chew, apply cosmetics, drink or smoke, workers shall follow the procedure described above, then dress in street clothes before entering the non-Work Areas of the building.

END OF SECTION

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SECTION 01563 - DECONTAMINATION UNITS

PART 1 - GENERAL

RELATED DOCUMENTS:

General Provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF WORK:

Require that the Personnel Decontamination Unit be the only means of ingress and egress for the Work Area. Require that all materials exit the Work Area through the Equipment Decontamination Unit.

SUBMITTALS:

Before Start of Work submit written description and/or sketch of Personnel and Equipment Decontamination Units as specified in Section 01300.

PART 2 - PRODUCTS

- A. Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6 mils thick, clear, or frosted.
- B. Reinforced Polyethylene Sheet: Where plastic sheet is the only separation between the Work Area and building exterior, provide translucent, nylon reinforced, laminated, flame resistant, polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame-resistant Textiles and Films. Provide largest size possible to minimize seams, 6 mils thick, or frosted.
- C. Duct Tape: Provide duct tape in 2 or 3 inch widths, with an adhesive specifically formulated to stick tenaciously to sheet polyethylene.
- D. Shower Pan: Provide one piece waterproof shower pan.
- E. Shower Walls: Provide walls fabricated from rigid, impervious, waterproof material. Structurally support as necessary for stability.
- F. Shower Head and Controls: Provide a factory made shower head. Feed shower with water mixed from hot and cold supply lines. Arrange so that control of water temperature, flow rate, and shut off is from inside shower without outside aid.

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- G. Filters: Provide filter units on drain lines from showers or any other water source carrying asbestos-contaminated water from the Work Area. Provide units with disposal dual filter elements with the primary filter allowing 20 microns and smaller and secondary to pass particles 5 microns and smaller
- H. Shower Stall: For Wash Down Station, provide leak tight shower enclosure with integrated drain pan. Structurally support as necessary for stability.
- I. Sump Pump: Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination procedures without damage to mechanism of pump.

PART 3 - EXECUTION

GENERAL

PERSONNEL DECONTAMINATION UNIT

A. Provide a Personnel Decontamination Unit consisting of a serial arrangement of the following connected rooms or spaces: Changing Room, Airlock, Shower Room, Airlock, Equipment Room. An example illustration is provided below.

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- B. Require all persons without exception to pass through this decontamination unit for entry into and exiting from the Work Area for any purpose. Do not allow parallel routes for entry or exit. Do not remove equipment or materials through Personnel Decontamination Unit. Provide temporary lighting within decontamination units as necessary to reach a lighting level of 100 foot candles.
- C. Changing Room (Clean Room): Provide a room that is physically and visually separated from the rest of the building for the purpose of changing into protective clothing. Construct using polyethylene sheeting, at least 6 mil in thickness, to provide an airtight seal between the Changing Room and the rest of the building. Locate so that access to Work Area from Changing Room is through Shower Room. Separate Changing Room from the building by a sheet polyethylene flapped doorway.
 - 1) Require workers to remove street clothes in this room, dress in clean disposable coveralls, and on respiratory protection equipment. Do not allow asbestos-contaminated items to enter this room. Require workers to enter this room either from outside the structure dressed in street clothes, or naked (or with a bathing suit as described in Section 01560) from the showers.
 - 2) An existing room may be utilized as the Changing Room if it is suitably located and of a configuration whereby workmen may enter the Changing Room directly from the Shower Room. Protect all surfaces of room with sheet plastic. Authorization for this must be obtained from the Owner in writing prior to start of construction.
 - 3) Maintain floor of Changing Room dry and clean at all times. Do not allow overflow water from shower to wet floor in the Changing Room.
 - 4) Damp wipe all surfaces twice after each shift change with a disinfectant solution.
 - 5) Provide a continuously adequate supply of disposable bath towels.
 - 6) Provide posted information for all emergency phone numbers and procedures.
 - 7) Provide one storage facility per employee.
- D. Shower Room: Provide a completely water tight operational shower to be used for transit by cleanly dressed workers heading for the Work Area from the Changing Room, or for showering by workers headed out of the Work Area undressing in the Equipment Room.
- E. Construct room by providing a shower pan and two shower walls in a configuration that will cause water running down walls to drip into pan. Install a freely draining wooden floor in shower pan at elevation of top of pan.
 - 1) Separate this room from the rest of the building with air tight walls fabricated of 6 mil polyethylene.
 - 2) Separate this room from the Changing and Equipment Rooms with airlocks fabricated of 6 mil polyethylene, at least three feet wide. Two airlocks are required, one between the Shower and Equipment Room, and one between the Shower and Changing Room.

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- 3) Provide splash-proof entrances to Changing and Equipment Rooms.
- F. Provide shower head and controls.
- G. Provide temporary extensions of existing hot and cold water and drainage as necessary for a complete and operable shower.
- H. Provide a soap dish and a continuously adequate supply of soap and maintain in sanitary condition.
- I. Arrange so that water from showering does not splash into the Changing or Equipment Rooms.
- J. Arrange shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or out-side of the Work Area.
- K. Provide flexible shower head.
- L. Pump waste to drain or to storage for disposal. If pumped to drain, provide 20 micron and 5 micron waste water filters in line to drain or waste water storage. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan.
- M. Provide Hose Bib.
- N. Equipment Room (Contaminated Area): Require work equipment, footwear and additional contaminated work clothing to be left here. This is a change and transit area for workers. Separate this room from the Work Area by a curtained doorway consisting of three sheets of overlapping 6 mil polyethylene sheeting. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet on the top and left side. All sheets have weights attached to the bottom to insure that the sheets hang straight and maintain a seal over the doorway when not in use.
- O. Work Area: Separate Work Area from the Equipment Room by poly-ethylene barriers. If the airborne asbestos level in the Work Area is expected to be high, as in dry removal, add an inter-mediate cleaning space between the Equipment Room and the Work Area. Damp wipe clean all surfaces after each shift change. Provide one additional floor layer of 6 mil polyethylene per shift change and remove contaminated layer after each shift.

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P. Airlocks: Airlocks are small rooms in the decontamination area, at least 3 feet wide and three feet deep, separated from the rest of the Work Area by at least 6 mil polyethylene walls. Airlocks must be placed between the Equipment Room and the Shower and between the shower and the Change Room. Each has two doors (Z-flaps) and in no case shall each of these doors be opened at the same time.

Q. Construction:

- 1) Walls and Ceiling: Construct air tight walls and ceiling using two layers polyethylene sheeting, at least 4 mil in thickness. Attach to existing building components or a temporary framework.
- 2) Floors: Use two layers (minimum) of 6 mil polyethylene sheeting to cover floors in the Equipment, Shower (underneath shower pan), and Changing Rooms. Provide an additional layer in the Equipment Room for every shift change expected.
- 3) Roll one layer of plastic from Equipment Room into Work Area after each shift change. Provide a minimum of two layers of plastic at all times. Use only clear plastic to cover floors.
- 4) Doors: Fabricate from three overlapping sheets (Z-Flaps) with openings a minimum of three feet wide. Configure so that sheeting overlaps adjacent surfaces. Sheets shall close after being released. Put arrows on sheets to indicate direction of overlap and travel. Provide a minimum length of three feet between entrance and exit of any room or airlock.
- 5) If the decontamination area is located on the exterior of a facility or within an area requiring abatement over the unit, construct the decontamination unit(s) with a minimum 1/4" plywood or acceptable solid construction for all exterior surfaces.
- 6) Visual Barrier: Where the decontamination area is immediately adjacent to and within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 6 mil in thickness so that worker privacy is maintained and work procedures are not visible to building occupants. Where the area adjacent to the decontamination area is accessible to the public, construct a solid barrier on the public side of the sheeting to protect the sheeting. Construct barrier with wood or metal studs covered with minimum 1/3" thick hardboard or 1/4" plywood. Where the solid barrier is provided, sheeting need not be opaque.
- R. Electrical: Provide subpanel at Changing Room to accommodate all removal equipment. Power subpanel directly from a building electrical panel. Connect all electrical branch circuits in decontamination unit and particularly any pumps in Shower Room to a ground-fault circuit protection device.

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ALTERNATE METHOD OF DECONTAMINATION

Alternate methods for decontamination may be submitted to the Designer and Owner for approval. Do not proceed with any such method(s) without prior written approval of the Designer and Owner.

DECONTAMINATION SEQUENCE

A. Entering Work Area:

- 1) Worker enters Changing Room and removes street clothing, puts on clean disposable coveralls and respirator, and passes through the Shower Room into the Equipment Room.
- 2) Any additional clothing and equipment left in Equipment Room needed by the worker in the area shall be put on in the Equipment Room.
- 3) Worker proceeds to Work Area.

B. Exiting Work Area:

- 1) Before leaving the Work Area, require the worker to remove all gross contamination and debris from overalls and feet. The worker then proceeds to the Equipment Room and removes all clothing except respiratory protection equipment (or bathing suit). Extra work clothing may be stored in contaminated end of the Equipment Room. Disposable coveralls are placed in a bag for disposal with other material.
- 2) The worker then proceeds to the shower, still wearing the respirator, and, using soap, washes off completely, paying special attention to the hair.
- 3) The worker washes off the respirator in the shower, then pulls it from his face and washes the facepiece to face seal area of the face and the respirator.
- 4) The worker then washes his hair again.
- 5) After completion of the shower, the worker removes the wet filters and discards them as contaminated waste, and proceeds to the clean room.
- 6) The worker then dresses in his street clothes, properly cleans and stores his respirator and exits the decontamination unit. Decontamination procedures shall be followed by all individuals leaving the Work Area.

EQUIPMENT DECONTAMINATION (LOADOUT) UNITS

A. Provide an Equipment Decontamination Unit for work areas over 1000 square feet consisting of a serial arrangement of rooms, Clean Room, Holding Room, Wash Room for removal of equipment and material from Work Area. Do not allow personnel to enter or exit Work Area through Equipment Decontamination Unit.

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- B. Wash Down Station: Provide an enclosed wash down unit located in Work Area just outside Wash Room as an equipment, bag, and container cleaning station.
- C. Holding Room: Provide Holding Room as a drop location for tagged asbestos-containing materials passed from the Wash Room. Waste material and equipment will be rebagged here. Construct Holding Room of 2" x 4" wood (or equivalent) framing and polyethylene sheeting, at least 6 mil in thickness and located so that bagged materials cannot be passed from the Wash Room through the Holding Room to the Clean Room. Separate this room from the Wash Room with an airlock as described previously.
- D. Clean Room: Provide Clean Room to isolate the Holding Room from the building exterior. Construct Clean Room of 2" x 4" wood (or equivalent) framing and polyethylene sheeting, at least 6 mil in thickness and locate to provide access to the Holding Room from the building exterior. Separate this room from the exterior by a single flap of 6-mil polyethylene sheeting and from the Holding Room by a door as described previously.
- E. Equipment or Material: Take all equipment or material from the Work Area through the Equipment Decontamination Unit according to the following procedure:
 - 1) At washdown station, thoroughly wet-clean contaminated equipment or sealed polyethylene bags and pass into Wash Room.
 - 2) When passing equipment or containers into the Wash Room, close all doorways of the Equipment Decontamination Unit, other than the doorway between the Washdown Station and the Wash Room. Keep all outside personnel clear of the Equipment Decontamination Unit.
 - 3) Once inside the Wash Room, wet-clean the bags and/or equipment.
 - 4) When cleaning is complete, pass items into Holding Room. Close all doorways except the doorway between the Holding Room and the Clean Room.
 - 5) Workers from the building exterior enter Holding Area and rebag and remove decontaminated equipment and/or containers for disposal. Waste material may be drummed at this point.
 - 6) Require these workers to wear full protective clothing and wear appropriate respiratory protection.
 - 7) At no time is worker from an uncontaminated area to enter the enclosure when a removal worker is inside.

CLEANING OF DECONTAMINATION UNITS

Clean debris and residue from inside of Decontamination Units on a daily basis. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis.

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SIGNS

Post an approximately 20 inch by 14 inch manufactured sign at each entrance to the Work Area displaying the following legend with letter sizes and styles of a visibility required by 29 CFR 1926.1101.

Legend

DANGER

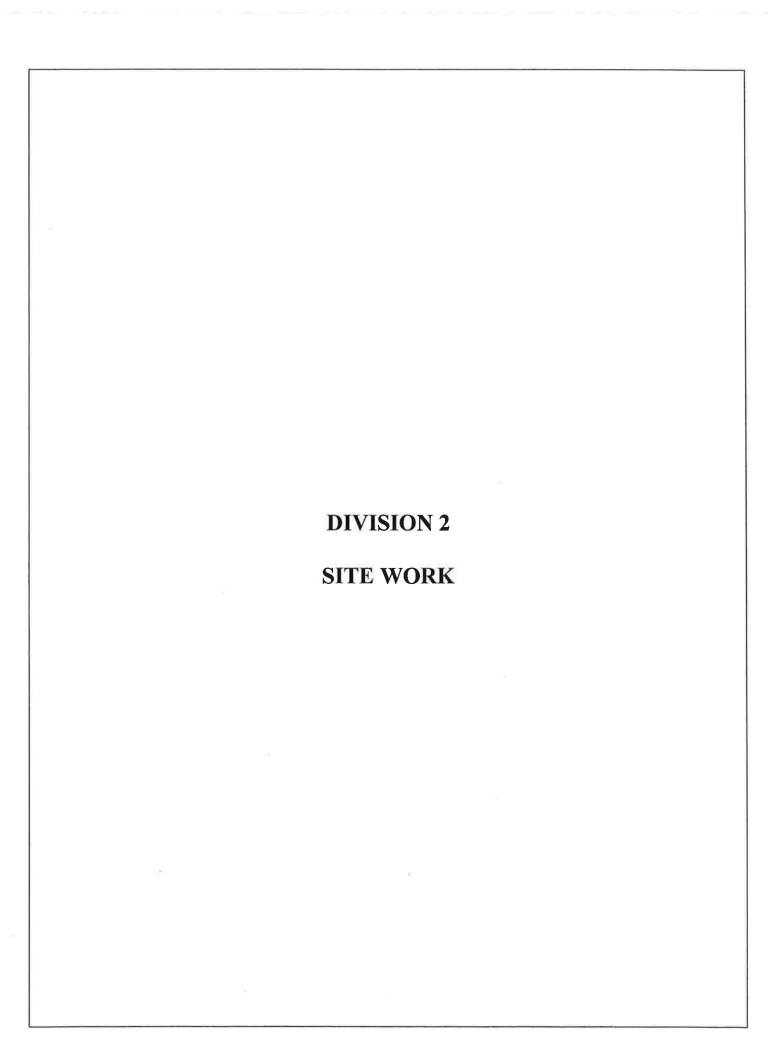
ASBESTOS

MAY CAUSE CANCER CAUSES DAMAGE TO LUNGS

AUTHORIZED PERSONNEL ONLY

WEAR RESPIRATORY PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

END OF SECTION



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SECTION 02081 - REMOVAL OF ASBESTOS CONTAINING MATERIALS

PART 1 - GENERAL

RELATED DOCUMENTS:

General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to Work of this section.

RELATED WORK SPECIFIED ELSEWHERE:

Summary of Work is specified in Section 01013.

Disposal of asbestos containing waste is specified in Section 02084.

Exhaust Ventilation Systems is specified in Section 01513.

Decontamination Units is specified in Section 1563.

WORK INCLUDED:

General: The Contractor will perform gross removal of asbestos containing materials. Refer to Section 01013 for the summary of Work required under this section.

SUBMITTALS:

Refer to Section 01300 for information on Submittals required under this section.

PART 2 - PRODUCTS:

- A. Contractor must furnish all labor, materials, equipment, and subcontractors necessary for removal and disposal of ACM in a manner consistent with these specifications. These materials include but are not limited to:
 - 1) Polyethylene sheeting (6 mil minimum thicknesses for critical and flooring use).
 - 2) Staples, nails, spray cement, and tape capable of sealing joints and securing polyethylene to all necessary surfaces.
 - 3) Surfactant mixed in recommended proportions.
 - 4) Containers to receive and retain ACM with appropriate labels.
 - 5) Warning signs and labels.

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- 6) Glove bags specifically designed for its application.
- 7) Encapsulants / Lockdown.
- 8) Other Materials: All necessary materials for removal and disposal of asbestos in compliance with all applicable codes and regulations, and these specifications.
- B. Deliver all materials in the original packages or containers bearing the name of the manufacturer and the brand name.
- C. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage or contamination.
- D. Damaged or deteriorated materials shall not be used and must be removed from the job site. Materials that become contaminated with asbestos must be disposed of in accordance with the applicable regulations.

TOOLS AND EQUIPMENT

- A. Provide suitable tools for asbestos removal, including but not limited to scrapers, brushes, razor knives, wrenches, tools for constructing containment and decontamination units, brooms, carts, and safety equipment.
- B. Provide suitable air moving and exhaust equipment, including but not limited to:
 - 1) A method for maintaining pressure differential of -0.02 inches of water column inside containment than outside. Refer to Section 01513 for requirements of Local Exhaust System Equipment.
 - 2) HEPA-filtered vacuums.
 - 3) Recording manometers for monitoring the pressure inside containment relative to outside.
- C. No equipment shall cause suspension of ACM within work area or discharge of asbestos fibers outside of work area.
- D. Transportation: As required for loading, temporary storage, transit, and unloading of contaminated waste without exposure to persons or property.

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PART 3 - EXECUTION

PREPARATION:

GENERAL - WORK AREAS

- A. Work Area: Is the location where asbestos-abatement work occurs. It is a variable of the extent of Work of the contract. For this project a "Work Area" is defined as the area in which asbestos removal is being performed. A "Work Area" is considered contaminated during the Work, and must be isolated from the balance of the building, and decontaminated at the completion of the asbestos-abatement work.
- B. Work Practice Variances. Any work practice variance must be approved by the Designer. If the variance request involves work practices which conflict state regulations, the variance must also be approved by the applicable state agency.
- C. Critical barriers: All asbestos abatement work involving friable and non-friable ACM shall require the installation of critical barriers at all penetrations to the work area.
- D. HVAC and Electrical Shut Down: HVAC systems serving the work area must be either shut down or temporarily capped on all asbestos abatement projects. Electrical systems serving the work area shall be shut down and secured, or special provisions with Owner must be made to ensure the safety of abatement workers while asbestos abatement is performed. All electrical equipment used by Contractor in the work area must be protected by GFI circuits.
- E. Pre-Cleaning: When Consultant has determined that friable or damaged ACM have contaminated or potentially contaminated equipment and surfaces in the work area, Contractor must HEPA vacuum and wet-wipe these items before application of protective coating.
- F. Polyethylene Sheeting: In general, all fixed objects and architectural surfaces in the work area must be protected from contamination during asbestos removal, or from damage during abatement. Polyethylene sheeting shall be flame retardant when used in areas of hot work.
- G. Should the area beyond the Work Area(s) become contaminated with asbestos containing dust or debris as a consequence of the Work, immediately notify Designer, stop all abatement work and clean those areas in accordance regulations and approved procedures. Perform all such required cleaning or decontamination at no additional cost to Owner.

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H. Asbestos Abatement Work Will Not Commence Until:

- 1) Arrangements have been made for disposal of waste at an acceptable site.
- 2) Appropriate waste containers are onsite.
- 3) Work Areas and decontamination enclosure systems and parts of the building required to remain in use are effectively segregated.
- 4) Tools, equipment and material waste receptors are on hand.
- 5) Proper notification has been made to the appropriate regulatory agency.
- 6) All other preparatory steps have been taken and applicable notices posted and permits obtained.
- 7) All worker training has been completed.
- 8) Work area has been observed by the Owner's Representative and/or Designer.

WORK AREA PREPARATION

A. WORK AREA PREPARATION FOR FULL CONTAINMENT

- 1) Post Warning signs and barrier tape in and around work area as required by all applicable regulatory agencies, and restrict access to work area to personnel approved by Contractor or Consultant.
- 2) All building ventilation air systems connected to the work area shall remain off and sealed during preparation and until the area has passed final visual inspection and final air sampling.
- 3) The Contractor shall implement an electrical practice protocol that includes, but is not limited to, lockout and GFCI shutdown as described in OSHA Construction Standard 29 CFR 1926.417. All electrical powered equipment utilized during the project shall have ground-fault protection as described in OSHA Construction Standards. All equipment and wiring shall be in compliance with National Fire Protection Association Standard 70, and the National Electrical Code.
- 4) Clean movable objects within the proposed work area using HEPA-filtered vacuums and/or wet cleaning methods as appropriate, and remove such objects from work area to a suitable temporary location.

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- 5) Clean fixed objects within the proposed work area using HEPA-filtered vacuums and/or wet cleaning methods as appropriate, and enclosed objects with 6 mil polyethylene sheeting and tape.
- 6) Clean proposed work areas using HEPA-filtered vacuums and/or wet cleaning methods as appropriate. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters must no be used.
- 7) The Contractor shall thoroughly seal the work area for the duration of the work by completely sealing off all openings and fixtures in the work area, including, but not limited to, heating and ventilation ducts, doorways, corridors, windows, skylights, and lighting, with plastic sheeting taped securely in place. If the Contractor is using sealant materials to fill in small holes or cracks, the material shall have appropriate fire ratings. When isolating the work area along halls, corridors, etc., provide solid plywood barriers with joints sealed and two layers of 6-mil polyethylene on both sides. Entrances and exists from the work area will have air locks and triple barriers of plastic sheeting so that the work area is always closed off by one barrier when workers enter or exit.
- 8) All wall and flooring surfaces in the work area shall be covered with "true virgin poly" plastic sheeting taped securely in place to protect from water damage (or damage by sealants). Alternatively, "shrink wrap" may be used to create outer containments. Two layers of 6 mil plastic sheeting are required on the floor. No water may be left standing in the floor at the end of the work day. Any costs associated with water damage or damage caused by securing plastic sheeting to areas inside or outside the abatement area shall be the Contractor's responsibility. Areas in which hot work is performed as part of the abatement, flame resistant polyethylene shall be used. Integrity of these seals shall be regularly checked and maintained by the Contractor.
- 9) Viewing windows (minimum 24"x24" of Plexiglas construction) shall be installed in multiple locations around the containment where feasible or as directed by the Owner, Designer, or Air Monitoring Firm. Locations shall be selected to provide line of sight to all abatement actions.
- 10) The Contractor shall set up a work area, loadout area and decontamination area as specified in section 01563. The decontamination facility outside of the work area shall consist of a change room, shower room, and equipment room with airlocks between each room. Any alterations to the designed decontamination facility shall be approved by the Designer.

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- 11) The Contractor shall establish and mark emergency and fire exits from the work area. Emergency procedures shall have priority over established decontamination entry and exit procedures. Install portable fire extinguishers in compliance with National Fire Protection Association, Standard No. 10, portable extinguishers. A minimum of one (1) ABC dry chemical rated fire extinguisher shall be in the clean room plus one for every 3000 square feet in the work area. Areas involving hot work shall have additional fire extinguishers and a fire watch.
- 12) A system of HEPA-equipped air filtration devices shall be configured so that a pressure differential is established between the work area and the surrounding area (-0.02" to 0-.04" water column) as required in Section 1513. Tests will be made and documented daily to confirm this condition. Additional air filtration devices are provided inside the work space so that the air is changed every 15 minutes. The total air exchange is the exhaust air plus the re-circulated air. A HEPA-equipped air filtration device shall be considered to exhaust 75% of its rated capacity unless the Contractor shows actual test data, no more than 24 hours old, that shows a higher rate, but no higher than the rated exhaust. The pressure differential is maintained at all times after preparation is complete and until the final visual inspection and air tests confirm the area is clean and acceptable for occupancy.

Air shall be exhausted outside the building. Any variations must be approved by the Designer. The exhaust system will be monitored by the Air Monitoring Firm for leaks. The Contractor shall check daily for leaks and log his checks in the bound log book. This includes checks internal to air moving devices.

High Efficiency Particulate Air (HEPA) filter exhaust systems equipped with new HEPA filters shall be used. Exhaust equipment and systems shall comply with ANSI Z9.2-79 and used according to manufacturer's recommendations.

B. ASBESTOS WORK AREA PREPARATION (NON-FRIABLE MATERIALS)

 Post Warning signs and barrier tape in and around work area as required by all applicable regulatory agencies, and restrict access to work area to personnel approved by Contractor or Consultant.

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- 2) Contractor shall establish an equipment room or area that is adjacent to the work area for the decontamination of workers and equipment contaminated with asbestos. The decontamination area shall consist of an area covered by an impermeable drop cloth on the floor or horizontal working surface, and be of sufficient size as to accommodate cleaning of equipment and removing personal protective equipment without spreading contamination beyond the area when acceptable by OSHA asbestos regulations.
- 3) Seal off all openings with critical barriers for interior removals. Critical barriers must be placed on penetrations that include but are not limited to; heating and ventilation ducts, doorways, corridors, and windows, with plastic sheeting taped securely in place.
- 4) All building ventilation air systems connected to the work area shall remain off and sealed during preparation and until the area has passed final visual inspection and final air sampling.
- 5) Clean and cover fixed surfaces in the proposed work area with polyethylene sheeting.
- 6) Provide polyethylene sheeting under materials to be removed. For roofing work, provide polyethylene sheeting at areas around collection bins to prevent soil contamination.
- 7) Install HEPA-filtered exhaust units in work area for interior removals. A pressure differential is not required.
- 8) The Contractor shall implement an electrical practice protocol that includes, but is not limited to, lockout and GFCI shutdown as described in OSHA Construction Standard 29 CFR 1926.417. All electrical powered equipment utilized during the project shall have ground-fault protection as described in OSHA Construction Standards. All equipment and wiring shall be in compliance with National Fire Protection Association Standard 70, and the National Electrical Code.
- 9) Maintain emergency and fire exits from work areas, or establish alternative exits satisfactory to the fire code.

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ASBESTOS REMOVAL

A. METHOD OF REMOVAL GROSS REMOVAL WITHIN FULL CONTAINMENT

- 1) Prior to asbestos removal, the Contractor's equipment, work area and decontamination units will be inspected and approved by the Air Monitoring Firm.
- 2) The asbestos material shall be sprayed with water containing an appropriate wetting agent (amended water) to enhance penetration. The wetting agent shall be in a concentration recommended by the manufacturer. A fine spray/mist of the amended water shall be applied to reduce fiber release before and during removal of the asbestos material. The material shall be sufficiently saturated to meet the NESHAP requirements referenced in these specifications and to prevent emission of airborne asbestos fibers in excess of the exposure limits prescribed in the OSHA 29 CFR 1926.1101 Standard referenced in thee specifications.
- 3) The asbestos material shall be removed in small sections by two-man teams, on staging platforms when necessary. There shall be a separate water source for each asbestos team in the work area. Before beginning the next section, the material shall be packed while still wet into sealable plastic bags (6-mil minimum) and placed into suitable containers for transport. Bags and containers shall be marked with labels prescribed by the OSHA and NESHAP regulations referenced in these specifications. All material shall be double bagged and the outside bag and container shall be clean before leaving the loadout area.
- 4) All loose asbestos material removed in the work area shall be bagged, sealed, and labeled properly before personnel breaks or end of shift.
- 5) All plastic sheeting, tape, cleaning material, clothing, and all other disposable material or items used in the work area shall be packed into sealable plastic bags (6-mil minimum). Each bag shall be individually sealed and placed in containers, at a minimum, a second bag, suitable for transport to the landfill.
- 6) All material shall be double bagged, and the outside bag and container shall be clean before leaving the loadout area. Bagged waste shall not accumulate in the work area. Contaminated materials, such as carpet, construction debris, pipe, gridwork, etc., may be wrapped in at least two (2) layers of plastic properly labeled and properly protected from perforations of the plastic (i.e., cardboard, multiple layers of plastic, etc.) as an alternative to using plastic bags. The bags and containers shall be marked with the OSHA label prescribed by the OSHA 29 CFR 1926.1101 Standard referenced in these specifications. In addition to the OSHA labeling requirements, all containers shall be labeled with the name of the waste

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generator and the location at which the waste was generated. Dispose of as specified in Section 02084.

7) All excess water (except shower water) shall be either combined with removed material or other absorptive material and properly disposed of as per EPA regulations, or filtered, using a 5-micron final filter, and disposed in the sanitary sewage system. Contractor shall not place water in storm drains, onto lawns, or into ditches, creeks, streams, rivers or other areas.

B. ASBESTOS REMOVAL (NON-FRIABLE MATERIALS)

- 1) Prior to asbestos removal, the Contractors equipment and work area will be reviewed by the Contractor's Onsite Supervisor to ensure compliance with regulations.
- 2) Wet nonfriable material with amended water and remove with appropriate equipment. Spray the asbestos material during the removal to maintain a wet condition and minimize asbestos fiber dispersion. The asbestos material shall be removed by means which do not render the material friable or prevent dust from being released during the removal. Do not subject the material to grinding, sanding, chipping or abrading. If the material should become friable, stop work and notify the designer.
- 3) Remove material in small sections. As it is removed place material in sealable 6 mil polyethylene bags or equivalent and place in appropriately labeled container for transport. Dispose of as specified in Section 02084.

C. ASBESTOS REMOVAL (ROOFING)

- 1) Prior to asbestos removal, the Contractors equipment and work area will be reviewed by the Contractor's Onsite Supervisor to ensure compliance with regulations.
- 2) Install critical barriers over all openings into building, adjacent buildings, or equipment within 30 feet of the work
- 3) Do not sand, abrade or grind roofing materials. Carry out all roofing removal in a manner that will minimize pulverizing, breaking or abrading of involved materials.

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- 4) Use Manual methods which do not render roofing material "non-intact." These include the use of spud, spade, flat-blade or slicing tools, such as axes, mattocks, pry bars, spud bars, crow bars, shovels, flat-blade knives, and utility knifes, to slice, cut, strip-off, shear-under, or pry up the material.
- 5) Use wet methods during removal, unless wet methods are not feasible or will create safety hazards.
- 6) Do not drop or throw ACM that has been removed from a roof to the ground. Either carry or pass the ACM to the ground by hand, or lower it to the ground via covered, dust-tight chute, crane or hoist.
- 7) Upon being lowered transfer unwrapped material to a closed receptacle in such manner so as to preclude the dispersion of dust. Dispose of as specified in Section 02084.

D. ASBESTOS REMOVAL (GASKETS)

- 1) Prior to asbestos removal, the Contractors equipment and work area will be reviewed by the Contractor's Onsite Supervisor to ensure compliance with regulations.
- 2) For gaskets removed in place use manual methods which do not render gasket "non-intact." Use wet methods during removal. Transfer waste to a waste bag and dispose of as specified in Section 02084.

INSPECTIONS OF THE WORK AREA DURING ABATEMENT

- A. The Air Monitoring Firm/Air Monitor must carry out inspections during the project to confirm that the means and methods of abatement conform to specified procedures. On a large asbestos abatement project, it is likely that work will proceed in phases through several areas. Consider each location isolated from another as an independent area, and inspect it as work is completed. Visual inspection activities must keep pace with the work progress and sequence so that the work in one area does not risk contaminating areas still undergoing preparation, or areas that have already been cleaned, inspected, and released. The following is required at a minimum:
 - a. Barriers of plastic sheeting, plywood, or equivalent materials should isolate the regulated areas, and should be left in place and intact throughout the work period. Closely inspect tears in the plastic floor covering prior to their being mended to see if any debris or water has leaked through to the surface below, particularly if carpeting is underneath. The integrity of the decontamination areas for personnel

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and equipment must be maintained throughout the work. Document inspections in the daily field notes and submit to the Designer weekly.

- b. Visually observe the removed material and contaminated water must not be allowed to accumulate inside the regulated area, but must be bagged or otherwise collected in water-tight containers as soon as practicable. Monitor the perimeter of the regulated area from inside and outside the isolation barriers. If the duct tape sealing the plastic sheeting is allowed to become wet, it may loosen and allow contaminated water and debris to run under the barriers to areas outside the regulated area. Similarly, the decontamination area must be kept strictly clean of any visible dust or debris. Document inspections in the daily field notes and submit to the Designer weekly.
- c. Negative pressure ventilation devices should be in continual operations in a regulated area throughout the period of abatement work. Record the readings on negative pressure monitoring devices on a regular or continuous basis for comparison to the required pressure differential. Readings shall be collected at a minimum of four times during every eight-hour work shift. For work shifts exceeding eight hours, readings shall be collected every two hours. Document inspections in the daily field notes and submit to the Designer weekly.
- d. Visually observe the containerized waste is properly labeled, is in good condition, and is not leaking. Additionally, observe the waste container is locked at all times unless actively loading.
- B. The Abatement Contractor shall also conduct routine inspections of the work area. At a minimum the above inspections listed above, independent of the Air Monitor shall be conducted. Document inspections in the daily field notes and submit to the Designer weekly.

FINAL INSPECTIONS AND CLEARANCE TESTING

A. The final visual inspection shall be performed in general accordance with ASTM E1368-14, Section 8.4, *Inspection at the Conclusion of the Project*. If the Air Monitoring Firm or Designer finds visible accumulations of asbestos debris in the work area after the abatement, Contractor shall repeat wet-cleaning until work area is in compliance, at Contractor's expense. All repeat visual inspections and air monitoring will be conducted only after all surfaces are dry. This shall be at the Contractor's expense. Clearance monitoring shall not commence until the work area is clean and dry.

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- B. When an inspection by the Air Monitoring Firm or Designer in the presence of Contractor determines that the area is free of accumulations of dust and visible debris, a tinted lockdown encapsulant may be applied prior to final air testing. Section 09805 outlines additional details.
- C. Only critical barriers and negative air exhaust units shall remain in the work area prior to initiating final clearance. The Air Monitoring Firm will, for this project, test final air quality clearance utilizing aggressive (for contained areas) or static methods (for glovebag removals) coupled with TEM analysis, upon notice and confirmation from Contractor that Work Areas and all other decontaminated and cleaned areas are ready. Sampling shall not begin until no visible water remains in work area. Sufficient time shall be allowed by the contractor for surfaces to dry. A minimum of 5 samples in each work area are required. Each sample shall have a minimum volume of 1,200 L of air. A clearance criterion of less than seventy (70) structures per millimeter squared (s/mm²) is required for TEM analysis.
- D. Reclean at Contractor's expense all areas which do not comply with the standard of cleaning for final clearance. Continue cleaning until the specified final air quality clearance level is achieved. Contractor shall bear cost of all follow-up test necessitated by the failure of the air tests to meet the specified final clearance level. Owner will deduct the cost of such follow-up tests from whatever monies remain due to the Contractor.
- E. Following acceptance of clearance level test results and after Testing Laboratory determines Work Area(s) to be visually decontaminated, the Contractor shall dismantle decontamination enclosure systems and thoroughly wet clean immediate areas. The Contractor shall dispose of debris, used cleaning materials, unsalvageable materials used for sturdy barriers, and any other remaining materials. Consider the materials as contaminated and dispose of as specified in Section 02084.

SITEWORK COMPLETION

Asbestos abatement work is complete upon meeting the Work Area clearance criteria and fulfilling the following:

- A. Remove all equipment, materials, debris from the Work site.
- B. Remove all residue from adhesives used. Damage to furnishings or equipment during construction activities shall be restored to existing condition or better at the expense of the Contractor.
- C. Dispose of all asbestos containing waste material as specified in Section 02084.

END OF SECTION

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SECTION 02084 - DISPOSAL OF ASBESTOS-CONTAINING MATERIALS

PART 1 - GENERAL

RELATED DOCUMENTS:

General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to Work of this section.

DISPOSAL:

Asbestos-containing waste material and debris which is packaged in accordance with the provisions of this specification may be disposed of at designated sanitary landfills when certain precautions are taken.

Notice and Permit from Appropriate State and/or Local Agencies.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

GENERAL:

Remove sealed and labeled containers of contaminated material and wastes and dispose of accordingly in approved landfill as follows:

- A. Notify Owner and/or Designer not less than 48 hours, prior to the proposed time of removing and delivery of contaminated waste to the landfill. The Owner and/or Designer may elect to observe this operation and provide photo documentation.
- B. All containers (bags, drums, wrapped components) are labeled so that labels have the appearance of or are designed in accordance with OSHA 29 CFR 1926.1101, August 10, 1994, as amended, and any subsequent amendments and editions, and EPA 40 CFR 61.150, November 20, 1990, as amended, and any subsequent amendments and editions.
- C. Containers shall be non-porous. The use of "Gaylord" type cardboard containers is not permitted to transport regulated waste on this project.
- D. Asbestos waste must be transported and disposed of in a manner that will not permit the release of asbestos fibers into the air.

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- E. The cargo area of the transport vehicle shall be free of debris and lined with 6-mil polyethylene sheeting. Floor sheeting shall be installed first and shall extend up the side walls at least 12 inches and shall be taped securely into place. Wall sheeting shall overlap by at least six inches and be taped into place. Ceiling sheeting shall extend down the side of the walls at least six inches and be taped into place.
- F. If asbestos waste is transported exclusively in leak-tight clean drums, then polyethylene sheeting is not required.
- G. Drums, bags and wrapped components that have been removed from the work area shall be loaded into an appropriate vehicle for transportation.
- H. Any debris or residue observed on containers or surfaces outside of the work area resulting from abatement activities shall immediately be cleaned using wet methods and vacuum equipment with a HEPA filter.
- I. Containers shall be carefully placed and not thrown into the truck cargo area. Drums shall be placed on a level surface in the cargo area and packed tightly or blocked and braced to prevent shifting and tipping. Large structural components shall be secured to prevent shifting.
- J. Asbestos waste shall be transported directly to an approved landfill and shall not be stored at a location other than the abatement site.
- K. Metal dumpsters or containers in which asbestos waste is temporarily stored at the abatement site shall be lined with 6-mil polyethylene sheeting to prevent contamination, and shall have doors and tops. The doors and tops shall be closed and locked except during loading or unloading asbestos waste.
- L. Metal dumpsters or containers used for waste storage shall be labeled in accordance with OSHA 29 CFR 1926.1101, August 10. 1994 as amended, and any subsequent amendments and additions.
- M. Bags shall be free of splits, rips and tears, and shall be carefully placed, not thrown, into the transport vehicle.
- N. The vehicle used to transport asbestos wastes shall be labeled in accordance with 40 CFR 61.149(d)(1)(i,ii,and iii) as amended, and any subsequent amendments and editions.
- O. Upon reaching the landfill, vehicles shall approach the dump location as closely as possible to unload asbestos waste.

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- P. Bags, drums and wrapped components shall be inspected when unloaded at the disposal site. Material in damaged containers shall be rewrapped, or shall be repacked in empty drums or bags.
- Q. Waste containers shall be place on the ground at the disposal site, not dropped or thrown out.
- R. Following the removal of all containerized waste, polyethylene sheeting shall be removed and discarded in bags or drums along with contaminated cleaning materials and protective clothing.
- S. After the asbestos waste has been unloaded, the truck cargo area, including the floor, walls and ceiling, shall be decontaminated using wet methods or a vacuum equipped with a HEPA filter until no visible residues remain.
- T. A waste shipment record shall be used and shall include the names of the facility owner, contractor and disposal site, the estimated quantity of asbestos waste, and the type and number of containers used. Each time the material changes custody, the record shall be sing by the persons receiving the waste. If a separate hauler is used, the hauler's name, address, telephone number and the driver's signature shall also appear on the record.
- U. Commercial rental vehicles shall not be used to transport any asbestos, asbestos-containing, or asbestos-containing waste.

END OF SECTION

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SECTION 09805 – LOCKDOWN PROCEDURES

PART 1 - GENERAL

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification sections, apply to Work of this section.

DESCRIPTION OF WORK:

The Work includes lockdown encapsulation of substrates during decontamination procedures as outlined in Section 02081. Contractor must spot test and ensure encapsulant compatibility with future finishes such as paint, wall paper, etc. on all building substrates.

SUBMITTALS:

Product Data: Submit manufacturer's technical information including label analysis and application instructions for each material proposed for use.

Installation Instructions: Submit manufacturer's installation instruction with specific project requirements noted.

Performance Warrantee: Submit manufacturer's performance guarantee.

Certification: Submit written approval of entity installing the encapsulant from encapsulant manufacturer.

Safety Data Sheet: Submit the Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for each surfactant and encapsulating material proposed for use on the Work. Include a separate attachment for each sheet INDICATING the specific worker protective equipment proposed for use with the material indicated.

DELIVERY AND STORAGE: Deliver materials to the job site in original, new and unopened packages and containers bearing manufacturer's name and label, and following information:

Name or title of material
Manufacturer's stock number and date of manufacture
Manufacturer's name
Thinning instructions
Application instructions

Deliver materials together with a copy of the Safety Data Sheet for the material.

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JOB CONDITIONS: Apply encapsulating materials only when environmental conditions in the Work Area are as required by the manufacturer's instructions and compatibility with planned paint finished are assured.

PART 2 - PRODUCTS

Encapsulants: Provide lockdown type encapsulants specifically designed for binding and adhesion of trace asbestos contamination after asbestos removal. The lockdown type encapsulant shall be tinted with a contrasting color to the work area to verify coverage.

Fire Safety: Use only materials that have a flame spread index of less than twenty-five, when dry, when tested in accordance with ASTM E-84.

PART 3 - EXECUTION:

GENERAL:

<u>Prior to applying</u> any encapsulating material, ensure that application of the sealer will not cause the base material to fail and allow the sealed material to fall of its own weight or separate from the substrate. Should Contractor doubt the ability of the substrate to support the sealant, request direction from the Engineer before proceeding with the encapsulating work.

<u>Do Not Commence Application of encapsulating materials</u> until all removal Work within the Work Area has been completed, and the Engineer has completed a visual inspection unless otherwise specified in this document.

WORKER PROTECTION:

Before beginning Work with any material for which a Safety Data sheet has been submitted, provide workers with the required protective equipment. Require that appropriate protective equipment be used at all times.

In addition to protective breathing equipment required by OSHA requirements or by this specification, use combination organic vapor - HEPA filters when organic solvent based encapsulants are in use.

Apply lockdown encapsulant to the substrates after all asbestos containing material has been removed and the Work Area has undergone final cleaning and finial inspections as specified in Section 02081, accordingly.

Apply encapsulant with an airless spray gun with air pressure and nozzle orifice as recommended by the encapsulant manufacturer.

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Apply second coat over first coat in strict conformance with manufacturer's instructions.

SEALING EXPOSED EDGES:

Seal edges of asbestos containing material exposed by removals up to an inaccessible spot such as a sleeve, wall penetration, etc. with two coats of encapsulant.

Prior to sealing, permit the exposed edges to dry completely to permit penetration of the sealer.

END OF SECTION

