**Project Manual** 

## CAPSTONE FLOORING RENOVATION PROJECT Columbia, South Carolina

Volume 1

RELEASED FOR BIDDING- FEBRUARY 27, 2019

University of South Carolina
University Project Number H27-Z384

**USC Housing Project: CAPSTONE FLOORING 2019** 



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U-17-039-4 1x1 Design, Inc. Post Office Box 5875 Columbia, South Carolina 29250

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#### **SE-310**

### INVITATION FOR DESIGN-BID-BUILD CONSTRUCTION SERVICES

AGENCY/OWNER: University of South Carolina	
PROJECT NAME: CAPSTONE FLOORING RENOVA	TION PROJECT
PROJECT NUMBER: H27-Z384	
PROJECT LOCATION: 902 Barnwell Street, Columbia,	SC
DESCRIPTION OF PROJECT/SERVICES: Capstone	Hall Residence Hall consists of 18 stories, including 17 residential
floors (309 Residential Rooms with a common lounge or	n each floor), Lobby and Basement Levels (including Residential
	nt will include multiple patterns of LVT, Carpet, Porcelain Tile, and
Rubber Stair Treads.	Transport do am private de tra con la faction de tra
	<b>EUCTION COST RANGE:</b> $$650,000$ to $$725,000$ N/A
PROJECT DELIVERY METHOD: Design-Bid-Build	
BID SECURITY IS REQUIRED IN AN AMOUNT NOT	Γ LESS THAN 5% OF THE BASE BID.
PERFORMANCE BOND REQUIRED? Yes ⊠ No	D ☐ PAYMENT BOND REQUIRED? Yes ☒ No ☐
BIDDING DOCUMENTS/PLANS MAY BE OBTAINED	<b>D FROM:</b> http://purchasing.sc.edu
PLAN DEPOSIT AMOUNT: \$ 0.00	IS DEPOSIT REFUNDABLE Yes No No N/A
Bidders must obtain Bidding Documents/Plans from the above listed source	ce(s) to be listed as an official plan holder. Bidders that rely on copies obtained from
any other source do so at their own risk. All written communications with	official plan holders & bidders will be via email or website posting.
All questions & correspondence concerning this Invitation shall be addres.	sed to the A/E.
A/E NAME: 1x1 Design, Inc.	
A/E CONTACT: Asheley Scott St. John AIA, LEED AP	
EMAIL: astjohn@1x1design.com	TELEPHONE: 803-834-4048
AGENCY PROJECT COORDINATOR: Clarissa Clark	
EMAIL: clarkcg2@mailbox.sc.edu	TELEPHONE: 803-777-7162
PRE-BID CONFERENCE: Yes ⊠ No □	MANDATORY ATTENDANCE: Yes \( \subseteq \text{No}  \( \subseteq \)
PRE-BID DATE: 3/19/2019	<b>TIME:</b> 10:00am
PRE-BID PLACE: 1300 Pickens St. Columbia,	SC Conference Room 100 C
BID DUE DATE: See Top of Page	<b>TIME:</b> 2:30 pm
BID OPENING PLACE: 1300 Pickens St. Colu	mbia, SC Conference Room 100 C
BID DELIVERY ADDRESSES:	
HAND-DELIVERY:	MAIL SERVICE:
Attn: Clarissa Clark	Attn: Clarissa Clark
1300 Pickens Street	1300 Pickens Street
Columbia, SC 29208	Columbia, SC 29208
IS PROJECT WITHIN AGENCY CONSTRUCTION CERTIFICATION	FICATION? (Agency MUST check one) Yes 🖂 No 🗌
APPROVED BY:	DATE:
(OSE Project Manager)	

# South Carolina Division of Procurement Services, Office of the State Engineer Version of AIA Document A701 $^{\text{TM}}$ – 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 AIA Document A701 $^{\text{TM}}$ – 1997

#### Instructions to Bidders

#### for the following PROJECT:

(Name and location or address)
CAPSTONE FLOORING RENOVATION PROJECT
902 Barnwell Street Columbia, SC 29208

#### THE OWNER:

(Name, legal status and address)
University of South Carolina
1300 Pickens St.
Columbia, SC 29208

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)
1x1 Design, Inc.
221 Pickens Street
Columbia, SC 29205

#### **TABLE OF ARTICLES**

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- 2 BIDDER'S REPRESENTATIONS
- 3 BIDDING DOCUMENTS
- 4 BIDDING PROCEDURES
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- 7 PERFORMANCE BOND AND PAYMENT BOND
- 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

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

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 A101<sup>TM</sup>—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 A201<sup>TM</sup>—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:

- .1 Is the person in the bidder's organization responsible for determining the prices being offered in this bid, and that the signatory has not participated and will not participate in any action contrary to 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];
- .3 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
- 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-
  - .1 Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
  - 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
  - .3 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.

- "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.

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#### § 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."

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

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.

§ 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

### § 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: <a href="https://www.sctax.org">www.sctax.org</a>
- § 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

Building Where Posted: University of South Carolina

Address of Building: 1300 Pickens Street, Columbia, South Carolina

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

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

Refer to Contract Documents and USC Supplemental General Conditions for Construction Projects.

## **AIA 310**

**Bid Bond** 

Original AIA Document on file at the office of
University of South Carolina
1300 Pickens Streeet
Columbia, South Carolina 29208

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

BID	SUBMITTED BY:
	(Bidder's Name)
BID	SUBMITTED TO:
	(Owner's Name)
FOR	R: PROJECT NAME: CAPSTONE FLOORING RENOVATION PROJECT
	PROJECT NUMBER: H27-Z384
OFF	ER
§ 1.	In response to the Invitation for Construction Services and in compliance with the Instructions to Bidders for the above-named Project, the undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with the Owner on the terms included in the Bidding Documents, and to perform all Work as specified or indicated in the Bidding Documents, for the prices and within the time frames indicated in this Bid and in accordance with the other terms and
§ 2.	conditions of the Bidding Documents.  Pursuant to SC Code § 11-35-3030(1), Bidder has submitted Bid Security as follows in the amount and form required by the Bidding Documents:  Bid Bond with Power of Attorney  Electronic Bid Bond  Cashier's Check
	(Bidder check one)
§ 3.	Bidder acknowledges the receipt of the following Addenda to the Bidding Documents and has incorporated the effects of said Addenda into this Bid:  (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 #5
§ 4.	Bidder accepts all terms and conditions of the Invitation for Bids, including, without limitation, those dealing with the disposition of Bid Security. Bidder agrees that this Bid, including all Bid Alternates, if any, may not be revoked or withdrawn after the opening of bids, and shall remain open for acceptance for a period of 60 Days following the Bid Date, or for such longer period of time that Bidder may agree to in writing upon request of the Owner.
§ 5.	Bidder herewith offers to provide all labor, materials, equipment, tools of trades and labor, accessories, appliances, warranties and guarantees, and to pay all royalties, fees, permits, licenses and applicable taxes necessary to complete the following items of construction work:
§ 6.1	BASE BID WORK (as indicated in the Bidding Documents and generally described as follows): Capstone Hall Residence
	Hall consists of 18 stories, including 17 residential floors (309 Residential Rooms with a common lounge on each floor).
	Lobby and Basement Levels (including Residential Learning Spaces, Offices, Rec Rooms). Flooring replacement will
	include multiple patterns of LVT, Carpet, Porcelain Tile, and Rubber Stair Treads.
	\$, which sum is hereafter called the Base Bid.  (Bidder to insert Base Bid Amount on line above)

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§ 6.2 BID ALTERNATES as indicated in the Bidding Documents and generally described as follows:

ALTERNATE # 1 (Brief Description):	
☐ ADD TO or ☐ DEDUCT FROM BASE BID: \$	
(Bidder to mark appropriate box to clearly indicate the price adjustment offered for each Alternate)	
ALTERNATE # 2 (Brief Description):	
☐ ADD TO or ☐ DEDUCT FROM BASE BID: \$	
(Bidder to mark appropriate box to clearly indicate the price adjustment offered for each Alternate)	
ALTERNATE # 3 (Brief Description):	
☐ ADD TO or ☐ DEDUCT FROM BASE BID: \$	
(Bidder to mark appropriate box to clearly indicate the price adjustment offered for each Alternate)	

#### § 6.3 UNIT PRICES:

**BIDDER** offers for the Agency's consideration and use, the following UNIT PRICES. The UNIT PRICES offered by BIDDER indicate the amount to be added to or deducted from the CONTRACT SUM for each item-unit combination. UNIT PRICES include all costs to the Agency, including those for materials, labor, equipment, tools of trades and labor, fees, taxes, insurance, bonding, overhead, profit, etc. The Agency reserves the right to include or not to include any of the following UNIT PRICES in the Contract and to negotiate the UNIT PRICES with BIDDER.

No.	ITEM	UNIT OF MEASURE	ADD	DEDUCT
<u>1.</u>		·	\$	
2.		<u> </u>	\$	\$
3.			\$	
4.			\$	
<u>5.</u>			\$	
6.			\$	

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## § 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:

(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	
	1	ALTERNATE #1	1
		ALTERNATE #2	
	1	ALTERNATE #3	1

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.

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#### § 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

#### § 9.

§ 9.		1-35-3020(b)(i).  ME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES
3 - •	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 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 \$ 500.00 for each Calendar Day the actual construction time required to achieve Substantial
		Completion exceeds the specified or adjusted time for Substantial Completion as provided in the Contract Documents.
		This amount is intended by the parties as the predetermined measure of compensation for actual damages, not as a
		penalty for nonperformance.
§ 10.	A	GREEMENTS
	a)	Bidder agrees that this bid is subject to the requirements of the laws of the State of South Carolina.
	b)	Bidder agrees that at any time prior to the issuance of the Notice to Proceed for this Project, this Project may be canceled for the convenience of, and without cost to, the State.
	c)	Bidder agrees that neither the State of South Carolina nor any of its agencies, employees or agents shall be responsible
		for any bid preparation costs, or any costs or charges of any type, should all bids be rejected or the Project canceled
		for any reason prior to the issuance of the Notice to Proceed.
§ 11.	EL	ECTRONIC BID BOND
	Ву	signing below, the Principal is affirming that the identified electronic bid bond has been executed and that the Principal
	anc	Surety are firmly bound unto the State of South Carolina under the terms and conditions of the AIA Document A310.
	Bio	Bond, included in the Bidding Documents.
	EL	ECTRONIC BID BOND NUMBER:
		CNATURE AND TITLE:

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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
the person signing and the Bidder, including without limitation, those appearing in Article 2 of th 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:

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### AIA Document A101-2007

Standard Form of Agreement between Owner and Contractor - South Carolina Division of Procurement Services, Office of State Engineer Version

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. Samples of these documents may be viewed in Appendix J.2 of the OSE Manual, found at

https://procurement.sc.gov/manual

# 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

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)
CAPSTONE FLOORING RENOVATION PROJECT
902 Barnwell Street, Columbia, SC 29208

#### THE OWNER:

(Name, legal status and address)
University of South Carolina
1300 Pickens St.
Columbia, SC 29208

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)

1x1 Design, Inc.

221 Pickens Street

Columbia, SC 29205

#### **TABLE OF ARTICLES**

- 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.

Init.

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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 Contractors, 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.

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#### § 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
  - .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect 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

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§ 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

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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.

§ 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

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§ 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

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
  - .1 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

- § 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;

not be reproduced prior to its completion.

- .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 costs.
  - .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;
- .6 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

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§ 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.

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- § 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

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§ 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

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

- .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 Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, 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;

- Claims for damages, other than to the Work itself, because of injury to or destruction of tangible .5 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;
- Claims for bodily injury or property damage arising out of completed operations; and .7
- 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.

COMMERCIAL GENERAL LIABILITY:

(a)	General Aggregate (per project)	\$1,000,000
(b)	Products/Completed Operations	\$1,000,000
(c)	Personal and Advertising Injury	\$1,000,000
(d)	Each Occurrence	\$1,000,000
(e)	Damage to Rented Premises (ea occurrence)	\$50,000
<b>(f)</b>	Medical Expense (Any one person)	\$5,000
USINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):		

- .2 BU
- WORKER'S COMPENSATION: .3
  - (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:

- names the Owner as an additional insureds for claims caused in whole or in part by the Contractor's .1 negligent acts or omissions during the Contractor's operations;
- provides that no material alteration, cancellation, non-renewal, or expiration of the coverage contained in such policy shall have effect unless all additional insureds have been given at least ten (10) days prior written notice of cancellation for non-payment of premiums and thirty (30) days prior written notice of cancellation for any other reason; and
- provides that the Contractor's liability insurance policy shall be primary, with any liability insurance of the Owner as secondary and noncontributory.

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

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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

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- .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; 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

not be reproduced prior to its completion.

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
  - .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials, or otherwise fails to prosecute the Work, or any separable part of the Work, with the diligence, resources and skill that will ensure its completion within the time specified in the Contract Documents, including any authorized adjustments;
  - .2 fails to make payment to Subcontractors for materials or labor in accordance with the Contract Documents and the respective agreements between the Contractor and the Subcontractors:
  - .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; 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
  - .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
  - .2 that an equitable adjustment is made or denied under another provision of the Contract.

## § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

- § 14.4.1 The Owner may, at any time, terminate the Contract 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.

## § 15.4 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.

	IECT-SPECIFIC REQUIREMENTS AND INFORMATION REQUIREMENTS (Indicate the inspection services required by the Contract)
	cial Inspections are required and are not part of the Contract Sum. (see section 01400) lding Inspections are required and are not part of the Contract Sum. (see section 01400)
The inspe	ections required for this Work are:
(Indicate	which services are required and the provider)
Civil:	
Struct	ural:
☐ Mech	anical:
Plumb	ping:
☐ Electr	ical:
Gas:	
Other	(list):
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. 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) Refer to Contract Documents.

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not be reproduced prior to its completion.

§ 16.3 Requirements for Record Drawings, if any. (Refer to attachments as needed, or enter NONE)

Refer to Contract Documents.

§ 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)

Refer to Contract Documents.

§ 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)

Refer to Contract Documents and USC Supplemental General Conditions for Construction Projects.

§ 16.6 Requirements for Project Cleanup in addition to the Contract, if any. (Refer to attachments as needed, or enter NONE)

Refer to Contract Documents.

§ 16.7 List all attachments that modify these General Conditions. (If none, enter NONE)

USC Supplemental General Conditions for Construction Projects.

## USC SUPPLEMENTAL GENERAL CONDITIONS FOR CONSTRUCTION PROJECTS

#### **WORK AREAS**

- 1. The Contractor shall maintain the job site in a safe manner at all times. This includes (but is not limited to) the provision and/or maintenance of lighting, fencing, barricades around obstructions, and safety and directional signage.
- 2. Contractor's employees shall take all reasonable means not to interrupt the flow of student traffic in building corridors, lobbies, stairs and exterior walks. All necessary and reasonable safety precautions shall be taken to prevent injury to building occupants while transporting materials and equipment through the work area. Providing safe, accessible, plywood-shielded pedestrian ways around construction may be required if a suitable alternative route is not available.
- 3. At the beginning of the project, the USC Project Manager will establish the Contractor's lay-down area. This area will also be used for the Contractor's work vehicles. The lay-down area will be clearly identified to the contractor by the Project Manager, with a sketch or drawing provided to USC Parking Services. In turn, Parking Services will mark off this area with a sign containing the project name, Project Manager's name, Contractor name and contact number, and end date. Where this area is subject to foot traffic, protective barriers will be provided as specified by the Project Manager. The area will be maintained in a neat and orderly fashion.
- 4. Work vehicles parked in the lay down area (or designated parking areas) will be clearly marked and display a USC-furnished placard for identification. No personal vehicles will be allowed in this area, or in any areas surrounding the construction site. Personal vehicles must be parked in the perimeter parking lots or garages. Temporary parking permits can be obtained at the Contractor's expense at the USC Parking Office located in the Pendleton Street parking garage. Refer to the CAMPUS VEHICLE EXPECTATIONS (below) for additional information.
- 5. Contractor is responsible for removal of all debris from the site, and is required to provide the necessary dumpsters which will be emptied on a regular basis. Construction waste must not be placed in University dumpsters. The construction site must be thoroughly cleaned with all trash picked up and properly disposed of on a daily basis and the site must be left in a safe and sanitary condition each day. The University will inspect job sites regularly and will fine any contractor found to be in violation of this requirement an amount of up to \$1,000 per violation.
- 6. The Contractor shall be responsible for erosion and sediment control measures where ground disturbances are made.

#### PROJECT FENCING

- 7. All construction projects with exterior impacts shall have construction fencing at the perimeter. Fencing shall be 6' chain link with black or green privacy fabric (80-90% blockage). For fence panels with footed stands, sandbag weights shall be placed on the inside of the fence. Ripped sandbags shall be replaced immediately.
- 8. For projects with long fencing runs and/or high profile locations, decorative USC banners shall be used on top of privacy fabric; banners should be used at a ratio of one banner for every five fence panels. USC Project Manager will make arrangements for banner delivery for Contractor to hang.
- 9. The use of plastic safety fencing is discouraged and shall only be used on a temporary basis (less than four weeks) where absolutely necessary. Safety fencing shall be a neon yellow-green, high-

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- visibility fencing equal to 'Kryptonight' by Tenax. Safety fencing shall be erected and maintained in a neat and orderly fashion throughout the project.
- 10. Vehicles and all other equipment shall be contained within a fenced area if they are on site for more than 3 consecutive calendar days.

#### **BEHAVIOR**

- 11. Fraternization between Contractor's employees and USC students, faculty or staff is strictly prohibited.
- 12. USC will not tolerate rude, abusive or degrading behavior on the job site. Heckling and cat-calling directed toward students, faculty or staff or any other person on USC property is strictly prohibited. Any contractor whose employees violate this requirement will be assessed a fine of up to \$500 per violation.
- 13. Contractor's employees must adhere to the University's policy of maintaining a drug-free and tobacco-free campus.

#### HAZARDOUS MATERIALS & SAFETY COMPLIANCE

- 14. A USC Permit to Work must be signed prior to any work being performed by the general contractor or sub-contractor(s).
- 15. The contractor will comply with all regulations set forth by OSHA and SCDHEC. Contractor must also adhere to USC's internal policies and procedures (available by request). Upon request, the contractor will submit all Safety Programs and Certificates of Insurance to the University for review.
- 16. Contractor must notify the University immediately upon the discovery of suspect material which may contain asbestos or other such hazardous materials. These materials must not be disturbed until approved by the USC Project Manager.
- 17. In the event of an OSHA inspection, the Contractor shall immediately call the Facilities Call Center, 803-777-4217, and report that an OSHA inspector is on site. An employee from USC's Safety Unit will arrive to assist in the inspection.

#### LANDSCAPE & TREE PROTECTION

- 18. In conjunction with the construction documents, the USC Arborist shall direct methods to minimize damage to campus trees. Tree protection fencing is required to protect existing trees and other landscape features to be affected by a construction project. The location of this fence will be evaluated for each situation with the USC Arborist, Landscape Architect and Project Manager. Tree protection fencing may be required along access routes as well as within the project area itself. Fence locations may have to be reset throughout the course of the project.
- 19. The tree protection fence shall be 6' high chain link fence with 80-90% privacy screening unless otherwise approved by USC Arborist and/or Landscape Architect. If the tree protection fence is completely within a screened jobsite fence perimeter, privacy fabric is not required. In-ground fence posts are preferred in most situations for greater protection. If utility or pavement conflicts are present, fence panels in footed stands are acceptable. See attached detail for typical tree protection fencing.
- 20. No entry, vehicle parking, or materials storage will be allowed inside the tree protection zone. A 4"

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layer of mulch shall be placed over the tree protection area to maintain moisture in the root zone.

- 21. Where it is necessary to cross walks, tree root zones (i.e., under canopy) or lawns the following protective measures shall be taken:
  - a. For single loads up to 9,000 lbs., a 3/4" minimum plywood base shall be placed over 4" of mulch.
  - b. For single loads over 9,000 lbs., two layers of 3/4" plywood shall be placed over 4" of mulch.
  - c. Plywood sheets shall be replaced as they deteriorate or delaminate with exposure.
  - d. For projects requiring heavier loads, a construction entry road consisting of 10' X 16' oak logging mats on 12" coarse, chipped, hardwood base. Mulch and logging mats shall be supplemented throughout the project to keep matting structurally functional.
- 22. Damage to any trees during construction shall be assessed by the USC Arborist, who will stipulate what action will be taken for remediation of damage. The cost of any and all remediation will be assumed by the contractor at no additional cost to the project. Compensation for damages may be assessed up to \$500 per caliper inch of tree (up to 8") and \$500 per inch of diameter at breast height (for trees over 8").
- 23. Damage to trunks and limbs, as well as disturbance of the root zone under the dripline of tree, including compaction of soil, cutting or filling, or storage of materials, shall qualify as damage and subject to remediation.
- 24. Any damage to existing pavements or landscaping (including lawn areas and irrigation) will be remediated before final payment is made.

#### TEMPORARY FACILITIES

- 25. Contractor will be responsible for providing its own temporary toilet facilities, unless prior arrangements are made with the USC Project Manager.
- 26. Use of USC communications facilities (telephones, computers, etc.) by the Contractor is prohibited, unless prior arrangements are made with the USC Project Manager.

#### **CAMPUS KEYS**

27. Contractor must sign a Contractor Key Receipt/Return form before any keys are issued. Keys must be returned immediately upon the completion of the work. The Contractor will bear the cost of any re-keying necessary due to the loss of or failure to return keys.

#### **WELDING**

28. A welding (hot work) permit must be issued by the University Fire Marshall before any welding can begin inside a building. The USC Project Manager will coordinate.

#### PROJECT EVALUATION & CLOSE-OUT

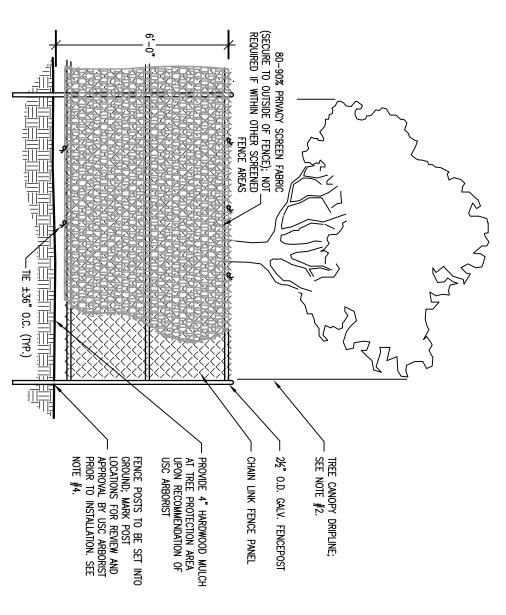
- 29. For all projects over \$100,000, including IDCs, a Contractor Performance Evaluation (SE 397) will be reviewed with the GC at the beginning of the project and a copy given to the GC. At the end of the project the form will be completed by the USC Project Manager and a Construction Performance rating will be established.
- 30. Contractor must provide all O&M manuals, as-built drawings, and training of USC personnel on new equipment, controls, etc. prior to Substantial Completion. Final payment will not be made until

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this is completed.

#### CAMPUS VEHICLE EXPECTATIONS

- Personal vehicles must be parked in the perimeter parking lots or garages. Temporary parking permits can be obtained at the Contractor's expense at the USC Parking Office located in the Pendleton Street parking garage.
- 32. All motorized vehicle traffic on USC walkways and landscape areas must be approved by the USC Project Manager and Parking Division, have a USC parking placard, and be parked within the approved laydown area. Violators may be subject to ticketing, towing and fines.
- 33. All motorized vehicles that leak or drip liquids are prohibited from traveling or parking on walks or landscaped areas.
- 34. Drivers of equipment or motor vehicles that damage university hardscape or landscape will be held responsible for damages and restoration expense.
- 35. All vehicles parked on landscape, hardscape, or in the process of service delivery, must display adequate safety devices, i.e. flashing lights, cones, signage, etc.
- 36. All drivers of equipment and vehicles shall be respectful of University landscape, equipment, structures, fixtures and signage.
- 37. All incidents of property damage shall be reported to Parking Services or the Work Management Center.



# NOTES:

- PROVIDE PROTECTION FENCING FOR ALL TREES WITHIN AREA OF DISTURBANCE AND CONSTRUCTION ACCESS.
- 2. PROTECTION FENCING SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
- 3. PROTECTION FENCING TO BE PLACED AT THE OUTSIDE OF THE CANOPY DRIPLINE, OR AT A DISTANCE OF ONE FOOT PER ONE INCH OF TREE DIAMETER, MEASURED AT BREAST HEIGHT, WHICHEVER IS LARGER, UNLESS OTHERWISE INDICATED ON LANDSCAPE PLAN OR APPROVED BY UNIVERSITY ARBORIST.
- 4. IN—GROUND POSTS ARE STANDARD. IF EXISTING ROOTS, UTILITIES OR PAVEMENT PRECLUDE USE OF IN—GROUND POSTS, FOOTED STANDS ARE ACCEPTABLE. SAND BAGS SHALL BE PLACED ON THE INSIDE OF FENCE.
- 5. DAMAGE TO ANY TREES DURING CONSTRUCTION SHALL BE ASSESSED BY UNIVERSITY ARBORIST AND THE UNIVERSITY ARBORIST SHALL STIPULATE WHAT ACTION WILL BE TAKEN FOR REMEDIATION OF DAMAGE. THE COST OF ANY AND ALL REMEDIATION WILL BE ASSUMED BY CONTRACTOR AT NO ADDITONAL COST TO THE PROJECT.
- 6. DISTURBANCE OF ROOT ZONE UNDER DRIPLINE OF TREE, INCLUDING COMPACTION OF SOIL, CUTTING OR FILLING OR STORAGE OF MATERIALS SHALL QUALIFY AS DAMAGE AND SUBJECT TO REMEDIATION.

Project Name: Capstone Flooring Renovation Project

Project Number: H27-Z384

University of South Carolina

## **CONTRACTOR'S ONE YEAR GUARANTEE**

STATE OF
COUNTY OF
WE
as General Contractor on the above-named project, do hereby guarantee that all work executed under the requirements of the Contract Documents shall be free from defects due to faulty materials and /or workmanship for a period of one (1) year from date of acceptance of the work by the Owner and/or Architect/Engineer; and hereby agree to remedy defects due to faulty materials and/or workmanship, and pay for any damage resulting wherefrom, at no cost to the Owner, provided; however, that the following are excluded from this guarantee;
Defects or failures resulting from abuse by Owner.
Damage caused by fire, tornado, hail, hurricane, acts of God, wars, riots, or civil commotion.
[Name of Contracting Firm]
*By
Title
*Must be executed by an office of the Contracting Firm.
SWORN TO before me this day of, 2 (seal)
State
My commission expires

## **SE-355**

## PERFORMANCE BOND

	MEN BY THESE PRESENTS, that (Insert)	full name or legal title and address of Contractor)			
Name: Address:					
hereinafter ref	Ferred to as "Contractor", and (Insert full name as	nd address of principal place of business of Surety)			
Name:					
Address:					
hereinafter cal	lled the "surety", are jointly and severally hel	ld and firmly bound unto (Insert full name and address of Agency)			
Name: University of South Carolina					
Address:	1300 Pickens Street				
	Columbia, South Carolina 29208				
of the Bond to		signs, the sum of(\$), being the sum e, the Contractor and Surety bind themselves, their heirs, executors, y, firmly by these presents.			
WHEREAS,	Contractor has by written agreement dated _	entered into a contract with Agency to construct			
State Proj	ect Name: CAPSTONE FLOORING RENO	VATION PROJECT			
State Proj	ect Number: H27-Z384				
		Residence Hall consists of 18 stories, including 17 residential floors			
		h floor), Lobby and Basement Levels (including Residential Learning will include multiple patterns of LVT, Carpet, Porcelain Tile, and			
	tair Treads.	will include multiple patterns of LV1, Carpet, Forceiani The, and			
	with Drawings and Specifications prepared l	by (Insert full name and address of A/E)			
Name:					
	1300 Pickens Street				
	Columbia, SC 29208				
which agreem	ent is by reference made a part hereof, and is	s hereinafter referred to as the Contract.			
		ding to be legally bound hereby, subject to the terms stated herein, do its behalf by its authorized officer, agent or representative.			
DATED this	day of, 2hall be no earlier than Date of Contract)	BOND NUMBER			
CONTRAC'	TOR	SURETY			
By:		By:			
,	(Seal)	(Seal)			
Print Name:	:	Print Name:			
Print Title:		Print Title:			
		(Attach Power of Attorney)			
Witness:		Witness:			

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

### PERFORMANCE BOND

#### 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.

## **SE-357**

## LABOR & MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, the	hat (Insert full name or legal title and address of Contractor)		
Name:			
Address:			
Name:	full name and address of principal place of business of Surety)		
hereinafter called the "surety", are jointly and sex	werally held and firmly bound unto (Insert full name and address of Agency)		
• • •	·, ·, ( · · · · · - ·		
1200 P. 1 G.			
Columbia, South Carolina 29208			
hereinafter referred to as "Agency", or its success of the Bond to which payment to be well and to administrators, successors and assigns, jointly and	sors or assigns, the sum of(\$), being the sum ruly made, the Contractor and Surety bind themselves, their heirs, executors, d severally, firmly by these presents.		
WHEREAS, Contractor has by written agreemen	nt dated entered into a contract with Agency to construct		
State Project Name: Capstone Flooring Reno	ovation Project		
State Project Number: <u>H27-Z384</u>			
(309 Residential Rooms with a common loun	one Hall Residence Hall consists of 18 stories, including 17 residential floors age on each floor), Lobby and Basement Levels (including Residential Learning placement will include multiple patterns of LVT, Carpet, Porcelain Tile, and		
in accordance with Drawings and Specifications 1	prepared by (Insert full name and address of A/E)		
Name: <u>University of South Carolina</u>			
Address: 1300 Pickens Street	0 Pickens Street		
Columbia, SC 29208			
which agreement is by reference made a part here	eof, and is hereinafter referred to as the Contract.		
each cause this Labor & Material Payment Bond to	tor, intending to be legally bound hereby, subject to the terms stated herein, do to be duly executed on its behalf by its authorized officer, agent or representative.  BOND NUMBER		
CONTRACTOR	SURETY		
By:	(Seal) By:(Seal)		
Print Name:	Print Name:		
Print Title:			
Witness:			

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

#### 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 o ne 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.

**SE-380** 

CHANGE	ODDED 1	NO.

CHANGE ORDER TO DESIGN-BID-BUILD CONSTRUCTION CONTRACT					
AGI	ENCY: University of South Carolina				
PRC	OJECT NAME: Capstone Flooring Renovation Project				
PRC	DJECT NUMBER: H27-Z384				
CONTRACTOR:		CONTRACT I	CONTRACT DATE:		
This (	Contract is changed as follows: (Insert description of change in space provided below)				
ADJ	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		
ADJ	JUSTMENTS IN THE CONTRACT TIME:				
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:			
	:(Signature of Representative) nt Name of Representative:				
	RECOMMENDATION FOR ACCEPTANCE:				
BY		Date:	Date:		
	(Signature of Representative)				
Pri	nt Name or Representative: Asheley Scott St. John				
AGE	NCY ACCEPTANCE AND CERTIFICATION:				
BY:(Signature of Representative)		Date:			
	(Signature of Representative) nt Name of Representative:				
			Yes □ No □		
AUTI	HORIZED BY:	DATE:			
	(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.

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#### SECTION 011000 - SUMMARY

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

#### A. Section Includes:

- 1. Project information.
- 2. Work covered by Contract Documents.
- 3. Work performed by Owner.
- 4. Work under Owner's separate contracts.
- 5. Contractor's use of site and premises.
- 6. Work restrictions.
- 7. Specification and Drawing conventions.

#### B. Related Requirements:

- 1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
- 2. Section 017300 "Execution" for coordination of Owner-installed products.

#### 1.3 DEFINITIONS

- A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.
- B. "Move in ready condition": defined as all affected interior surfaces must be wiped down and/or vacuumed, to remove all dust and debris, excess adhesives, excess grouts, in accordance to manufacturers' recommended cleaning instructions for each product.

#### 1.4 PROJECT INFORMATION

- A. Project Identification: USC Capstone Flooring Renovation Project.
  - 1. Project Location: 902 Barnwell Street | Columbia, SC.
- B. Owner: University Housing, The University of South Carolina.
- C. Owner's Procurement Representative: Clarissa Clark, <u>clarkcg2@mailbox.sc.edu</u>.

- D. Owner's Project Manager: James Sherry, JSHERRY@mailbox.sc.edu
- E. Architect: 1X1 Design Inc., Asheley Scott St. John
  - 1. Architect's Representative: Anna Gray Fender, afender@1x1design.com.

#### F. General Contractor:

1. The Contractor will have one joint point of contact for the duration of this project, the Architect/Owner's Representative. At no time is the Contractor to ask questions or take direction from any other individuals. Should an incident occur where they are approached by University staff, the Contractor must direct that person to the Owner's Representative.

#### 1.5 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:
  - 1. The contractor must furnish all labor, materials and equipment required to perform the following: protect, prepare, and perform removal of carpet, VCT, rubber landings, stair treads and base as called out; preparation of all substrates according to manufacturer guidelines; replacement with new carpet tiles, LVT, porcelain tile and base, rubber landings, and stair treads basement through 19th floor in the following Residence Hall: Capstone - This building is 158,201 gross square feet with 18 floors including 17 residential floors, main lobby and basement. There are 309 student Suitestyle resident rooms, and a small variety of common lounges, studies, residential learning spaces, and offices and other Work indicated contractor shall remove/demo wall base and flooring as shown in the Contract Documents. Hazmat: The bid documents and drawings. All hazmat abatement called out in drawings will be completed under University Health and Safety Direction by a Certified University procured Hazmat Contractor and not in scope of GC. Contractor shall remove/demo wall base and flooring as shown in bid documents and drawings. All hazmat abatement called out in drawings will be completed under University Health and Safety Direction by a Certified University procured Hazmat Contractor and not in scope of GC.
  - 2. Most furniture will remain in the building. Furniture remaining in building must be moved from one side to another, as needed for work by flooring Contractor. At the end of the project, all furniture must be set up by flooring Contractor, per sheet F1.0, included. Personal belongings, computers, and books will be removed prior to the start of the project. Furniture remaining in the building to be coordinated by General Contractor includes the following:
    - a. Resident Room Furniture: 619 sets of resident room furniture; 2-sets per room. One set includes: 1-bed (spring and 2 bed ends), 1-mattress, 1-desk, and 1 chest.
    - b. Office Furniture: 4-sets of office furniture; Set includes; 1-desk, 1-desk return, 1-desk hutch, 2 file cabinets, 2-quest chairs, and 1-task chair.

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c. Pro-staff Apartment Furniture: Includes the following; 1-sofa, 2-lounge chairs, 2+ottomans, 2-end tables, 1-queen size bed (1-headboard, 1-mattress, 1-boxspring, 1-frame), 1-dresser, 2-night stands, 4-lamps, 1-dining table, and 4-dining chairs.

#### B. Type of Contract:

1. Project will be constructed under a single prime contract.

#### C. PROPOSED PROJECT SCHEDULE

- 1. Project Advertisement: As posted on SCBO
- 2. Pre-Bid Conference: As indicated in SE-310 and modified by any Addenda
- 3. Bid /Submittal Due Date: As indicated in SE-310 and modified by any Addenda
- 4. Issuance of Notice of Intent to Award: As established in Bid Opening
- 5. Issuance of Notice to Proceed: Ten (10) days following the Notice of Intent to Award (NOTE: This is the contractual start date)
- 6. Pre-construction Activities: To be ongoing starting with the date of the Issuance of the Notice to Proceed and concluding as deemed necessary by the awarded Contractor.
  - a. Activities are intended to include Pre-Construction Meeting, Submittal Review, Construction Schedule, and other activities as required by the project scope.
- 7. USC Housing Full Access to Project Site; All Other Contractors have Limited Access to Project Site: May 13, 2019
  - a. Multiple Owner contractors in building to "trash", clean and perform University Maintenance projects., See Details, this section.
  - b. Access to Site for GC for existing verification- NO Construction activities should be planned for
- 8. HAZMAT Full Access to Project Site; All Other Contractors have Limited Access to Project Site: May 15, 2019
  - a. USC HAZMAT and/or third-party contractor to begin removal of hazardous materials. Schedule and sequencing to be determined during pre-construction activities.
- 9. General Contractor Full Access to Project Site: No Later than May 27, 2019
  - a. All other concurrent work performed by Owner, work under separate contracts and general University maintenance may occur at any time during this time-frame

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- 10. Substantial Completion: July 10, 2019
  - a. Contractual Date for enforcing Liquidated Damages
- 11. Final Completion: No Later than July 17, 2019
  - a. See Project Manual for Close-Out Procedures, Observation Reports, Punch-List Requirements, Etc.
- 12. Ten-Month Warranty Walk-Though: Summer 2020

#### 1.6 WORK PERFORMED BY OWNER AND WORK UNDER OWNER'S SEPARATE CONTRACTS

- A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.
- B. Work with Separate Contractors: Cooperate fully with Owner's separate contractors, so work on those contracts may be carried out smoothly, without interfering with or delaying Work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under Owner's separate contracts.
- C. Preceding Work: Owner will perform the following construction operations at Project site. Those operations are scheduled to be substantially complete before Work under this Contract begins.
  - 1. University Maintenance to complete "Trashing" of building after student move-out
  - 2. HAZMAT removal of selected finish flooring and accessories. HAZMAT is intended to be fully complete with removal of hazardous materials within specified boundaries prior to turn-over of spaces to General Contractor. For example, HAZMAT MAY elect to turn-over several floors at a time prior to completion of the full project scope.
- D. Concurrent Work: Owner will perform the following construction operations at Project site. Those operations are scheduled to be completed concurrently with the Work under this Contract.
  - 1. Ten-month Walk-Through for Warranty Review of Interior Painting (Completed During Summer 2018) will be completed during
- E. Subsequent Work: Owner will perform the following additional work at site after Substantial Completion. Completion of that work will depend on successful completion of preparatory Work under this Contract.
  - 1. New Furniture Installation
  - 2. Signage and Equipment Installation
  - 3. Summer Maintenance Projects
  - 4. Life Safety-Inspections and Testing

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#### 1.7 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Use of Site and Premises is clarified in Proposed Project Schedule, above, and by USC Supplemental General Conditions for Construction Projects.
- B. Five (5) access cards for each building will be issued to the Contractor for the duration of the project. The access cards will be activated to allow the Contractor to enter the buildings, only during approved working hours agreed upon by the University Housing Project Manager. The Contractor will assume all responsibility for the cards, utilizing a belt loop attachment, or lanyard for added security. The Contractor will be charged \$35, per card, for all cards not returned upon completion of the project. All access cards and/or red core keys must be signed out by the responsible party. If a card is misplaced, you must notify University Housing immediately, to deactivate the card and keep the building secure.
- C. Keys to students' rooms, offices, and staff apartments, are prohibited. All Doors will be open by University Housing Personnel, prior to the commencement of work.
- D. The Contractor is responsible for assuring all windows and entry doors are closed and locked at the end of the work shift. Maintaining security of the building must be the Contractor's responsibility for the duration of the project.
- E. Unrestricted Use of Site: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- F. Limits on Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- G. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

#### 1.8 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

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- B. On-Site Work Hours: Contractor will have access and may work 24 hours a day, 7 days a week, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.
  - 1. Weekend Hours: As coordinated with Architect with prior approval from USC.
  - 2. Early Morning Hours: As coordinated with Architect with prior approval from USC.
- C. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Owner's property is not permitted.
- D. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- E. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
  - 1. Maintain list of approved screened personnel with Owner's representative.
- F. Contractors must be responsible to ensure the professional conduct of their employees and Subcontractors while on University property and will be held accountable for any conduct that violates University policy.
- G. In accordance with University Policy, sexual harassment, discrimination and the use of alcohol or drugs is strictly forbidden. Refer to: http://www.sc.edu/policies/policiesbydivision.php for policy details.
- H. Proper attire must be worn always. Tank tops, shorts and open toe shoes are not permitted on site, at any time.
- I. The Contractor must not allow its workers and Subcontractors to dispose any food waste/items into their construction dumpster to prevent potential rodent infestation of the dumpster. All food/waste items must be removed daily from inside the buildings and disposed of off Campus daily.
- J. Workers are prohibited from standing on or using existing furniture (i.e., desks, desk chair, beds, etc.) for any reason, including in lieu of approved stepladders.
- K. Bathroom sinks, showers or tubs may not be used for the cleaning of Contractor tools and equipment, except where designated by University Housing Project Manager. Refer to drawings for locations.
- L. The Contractor will not be allowed to access any rooms or buildings, that do not require any work under this project, for any reason. Contractors found in areas, other than as designated in this project, must be found to be trespassing, and will be reported to authorities.
- M. Damage to state property: Extreme care must be exercised to avoid damaging tree, shrubs, plants, containers, buildings, or other structures. If any of the above is damaged or destroyed due to negligence of the Contractor, it will be the responsibility of the Contractor to repair or replace at no cost to the University.

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#### 1.9 SPECIFICATION AND DRAWING CONVENTIONS

- A. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 011000** 

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#### **SECTION 012500 - SUBSTITUTION PROCEDURES**

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for products selected under an allowance.
  - 2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### 1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

#### 1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use form acceptable to Architect.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.

- b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
- c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
- i. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- j. Cost information, including a proposal of change, if any, in the Contract Sum.
- k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
- I. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
  - a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

#### 1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

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#### 1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

#### 1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. Requested substitution will not adversely affect Contractor's construction schedule.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within seven days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.

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- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 012500** 

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#### SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

#### B. Related Requirements:

- 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.
- 2. Section 013100 "Project Management and Coordination" for requirements for forms for contract modifications provided as part of web-based Project management software.

#### 1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710.

#### 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

- c. Include costs of labor and supervision directly attributable to the change.
- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
  - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Include costs of labor and supervision directly attributable to the change.
  - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  - 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system specified.
  - 7. Proposal Request Form: Use form acceptable to Architect.

#### 1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

#### 1.6 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

#### 1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

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- 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 012600** 

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#### **SECTION 012900 - PAYMENT PROCEDURES**

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

#### B. Related Requirements:

- 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
- 2. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
- 3. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

#### 1.3 DEFINITIONS

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

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule. Cost-loaded Critical Path Method Schedule may serve to satisfy requirements for the schedule of values.
  - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the schedule of values:

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- a. Project name and location.
- b. Owner's name.
- c. Owner's Project number.
- d. Name of Architect.
- e. Architect's Project number.
- f. Contractor's name and address.
- g. Date of submittal.
- 2. Arrange schedule of values consistent with format of AIA Document G703.
- 3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:
  - a. Related Specification Section or division.
  - b. Description of the Work.
  - c. Name of subcontractor.
  - d. Name of manufacturer or fabricator.
  - e. Name of supplier.
  - f. Change Orders (numbers) that affect value.
  - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
    - 1) Labor.
    - 2) Materials.
    - 3) Equipment.
- 4. Overhead Costs, Proportional Distribution: Include total cost and proportionate share of general overhead and profit for each line item.
- 5. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

#### 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments, as certified by Architect and paid for by Owner.
- B. Payment Application Times: Submit Application for Payment to Architect by the 20th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
  - 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

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- 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
- 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
- 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
  - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
  - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  - 3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit four signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt. One copy shall include waivers of lien and similar attachments if required.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
  - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  - 2. When an application shows completion of an item, submit conditional final or full waivers.
  - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  - 4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

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- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of values.
  - 3. Contractor's construction schedule (preliminary if not final).
  - 4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
  - 5. Products list (preliminary if not final).
  - 6. Schedule of unit prices.
  - 7. Submittal schedule (preliminary if not final).
  - 8. List of Contractor's staff assignments.
  - 9. List of Contractor's principal consultants.
  - 10. Copies of building permits.
  - 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 12. Initial progress report.
  - 13. Report of preconstruction conference.
  - 14. Certificates of insurance and insurance policies.
  - 15. Performance and payment bonds.
  - 16. Data needed to acquire Owner's insurance.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  - 1. Certification of completion of final punch list items.
  - 2. AIA Document G706.
  - 3. AIA Document G706A.
  - 4. AIA Document G707.
  - 5. Evidence that claims have been settled.
  - 6. Final liquidated damages settlement statement.
  - 7. Proof that taxes, fees, and similar obligations are paid.
  - 8. Waivers and releases.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 012900** 

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#### SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. RFIs.
  - 4. Digital project management procedures.
  - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

#### C. Related Requirements:

- 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
- 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
- 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

#### 1.3 DEFINITIONS

A. RFI: Request for Information. Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.

- 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 10 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
  - 1. Post copies of list in Project meeting room, in temporary field office, and in prominent location in built facility. Keep list current at all times.

#### 1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results, where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Pre-installation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.

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#### 1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Indicate required installation sequences.
    - c. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
  - 1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  - 2. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
  - 3. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
  - 1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
  - 2. File Submittal Format: Submit or post coordination drawing files using PDF format.

#### 1.7 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

- 1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
- 2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  - 1. Project name.
  - 2. Owner name.
  - 3. Owner's Project number.
  - 4. Name of Architect.
  - 5. Architect's Project number.
  - 6. Date.
  - 7. Name of Contractor.
  - 8. RFI number, numbered sequentially.
  - 9. RFI subject.
  - 10. Specification Section number and title and related paragraphs, as appropriate.
  - 11. Drawing number and detail references, as appropriate.
  - 12. Field dimensions and conditions, as appropriate.
  - 13. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  - 14. Contractor's signature.
  - 15. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.
  - 1. Attachments shall be electronic files in PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
  - 1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.

- 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.
- 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
  - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:
  - 1. Project name.
  - 2. Name and address of Contractor.
  - 3. Name and address of Architect.
  - 4. RFI number, including RFIs that were returned without action or withdrawn.
  - 5. RFI description.
  - 6. Date the RFI was submitted.
  - 7. Date Architect's response was received.
  - 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
  - 9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

#### 1.8 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Architect's Data Files Not Available: Architect will not provide Architect's CAD drawing digital data files for Contractor's use during construction.
- B. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
  - 1. Assemble complete submittal package into a single indexed file, incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  - 2. Name file with submittal number or other unique identifier, including revision identifier.
  - 3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

## 1.9 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
  - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of 10 working days prior to meeting.
  - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  - 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 10 days after execution of the Agreement.
  - 1. Attendees: Authorized representatives of Owner Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Use of web-based Project software.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for RFIs.
    - j. Procedures for testing and inspecting.
    - k. Procedures for processing Applications for Payment.
    - I. Distribution of the Contract Documents.
    - m. Submittal procedures.
    - n. Preparation of Record Documents.
    - o. Use of the premises and existing building.
    - p. Work restrictions.
    - q. Working hours.
    - r. Owner's occupancy requirements.
    - s. Responsibility for temporary facilities and controls.
    - t. Procedures for moisture and mold control.
    - u. Procedures for disruptions and shutdowns.
    - v. Construction waste management and recycling.
    - w. Parking availability.
    - x. Office, work, and storage areas.
    - y. Equipment deliveries and priorities.
    - z. First aid.
    - aa. Security.

- bb. Progress cleaning.
- 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
  - 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
  - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. Contract Documents.
    - b. Related RFIs.
    - c. Related Change Orders.
    - d. Submittals.
    - e. Review of mockups.
    - f. Compatibility requirements.
    - g. Time schedules.
    - h. Manufacturer's written instructions.
    - i. Warranty requirements.
    - j. Compatibility of materials.
    - k. Acceptability of substrates.
    - I. Temporary facilities and controls.
    - m. Space and access limitations.
    - n. Regulations of authorities having jurisdiction.
    - o. Testing and inspecting requirements.
    - p. Installation procedures.
    - q. Coordination with other work.
    - r. Required performance results.
    - s. Protection of adjacent work.
    - t. Protection of construction and personnel.
  - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at regular intervals. Schedule to be determined and anticipated to include weekly intervals.
  - 1. Coordinate dates of meetings with preparation of payment requests.
  - 2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and 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 meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
- 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
  - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - 1) Review schedule for next period.
  - b. Review present and future needs of each entity present, including the following:
    - 1) Interface requirements.
    - 2) Sequence of operations.
    - 3) Status of submittals.
    - Deliveries.
    - 5) Off-site fabrication.
    - 6) Access.
    - 7) Site use.
    - 8) Temporary facilities and controls.
    - 9) Progress cleaning.
    - 10) Quality and work standards.
    - 11) Status of correction of deficient items.
    - 12) Field observations.
    - 13) Status of RFIs.
    - 14) Status of Proposal Requests.
    - 15) Pending changes.
    - 16) Status of Change Orders.
    - 17) Documentation of information for payment requests.
- 4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
  - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- E. Coordination Meetings: Conduct Project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and pre-installation conferences.

- 1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and 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 meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
- 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
  - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
  - b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
  - c. Review present and future needs of each contractor present, including the following:
    - 1) Interface requirements.
    - 2) Sequence of operations.
    - 3) Status of submittals.
    - 4) Deliveries.
    - 5) Off-site fabrication.
    - 6) Access.
    - 7) Site use.
    - 8) Temporary facilities and controls.
    - 9) Work hours.
    - 10) Hazards and risks.
    - 11) Progress cleaning.
    - 12) Quality and work standards.
    - 13) Status of RFIs.
    - 14) Proposal Requests.
    - 15) Change Orders.
    - 16) Pending changes.
- 3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013100** 

### SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Contractor's Construction Schedule.
  - 2. Construction schedule updating reports.
  - 3. Daily construction reports.

# B. Related Requirements:

1. Section 012900 "Payment Procedures" for schedule of values and requirements for use of cost-loaded schedule for Applications for Payment.

### 1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
  - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
  - 2. Predecessor Activity: An activity that precedes another activity in the network.
  - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for completing an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine the critical path of Project and when activities can be performed.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.

- F. Float: The measure of leeway in starting and completing an activity.
  - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
  - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
  - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.

# 1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
  - 1. Working electronic copy of schedule file.
  - 2. PDF file.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period, to be submitted within 7 calendar days from Notice to Proceed.
  - 1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- C. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
  - 1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
  - 2. Logic Report: List of preceding and succeeding activities for each activity, sorted in ascending order by activity number and then by early start date, or actual start date if known.
- D. Construction Schedule Updating Reports: Submit with Applications for Payment.
- E. Daily Construction Reports: Submit at weekly intervals.

# 1.5 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.

2. Coordinate each construction activity in the network with other activities, and schedule them in proper sequence.

## 1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
  - 1. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
  - 2. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
  - 3. Punch List and Final Completion: Include not more than seven days for completion of punch list items and Final Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
  - 1. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  - 2. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Submittals.
    - b. Mockups.
    - c. Installation.
    - d. Curing.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- F. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
  - 1. See Section 012900 "Payment Procedures" for cost reporting and payment procedures.

- G. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
  - 1. Unresolved issues.
  - 2. Unanswered Requests for Information.
  - 3. Rejected or unreturned submittals.
  - 4. Notations on returned submittals.
  - 5. Pending modifications affecting the Work and the Contract Time.
- H. Contractor's Construction Schedule Updating: Twice a month, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
  - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate Final Completion percentage for each activity.
- I. Recovery Schedule: When periodic update indicates the Work is 7 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished. If at any time, the Contractor falls more than six (6) calendar days behind schedule without approved recovery schedule, University Housing reserves the right to bring in an additional, separate Contractor to perform the work to guarantee staff and students move in, as scheduled. The costs of bringing in an additional, separate Contractor will be deducted from the original Contractor's final payments.
- J. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

# 1.7 CPM SCHEDULE REQUIREMENTS

- A. Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within ten days of date established for the Notice to Proceed. Outline significant construction activities for the first 30 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

- C. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.
  - 1. Develop network diagram in sufficient time to submit CPM schedule, so it can be accepted for use no later than 30 days after date established for the Notice to Proceed.
    - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.
  - 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
  - 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
  - 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
  - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Mobilization and demobilization.
    - c. Purchase of materials.
    - d. Delivery.
    - e. Installation.
    - f. Work by Owner that may affect or be affected by Contractor's activities.
    - g. Punch list and Final Completion.
    - h. Activities occurring following Final Completion.
  - 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
  - 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
  - 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
    - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.

- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
  - 1. Contractor or subcontractor and the Work or activity.
  - 2. Description of activity.
  - 3. Main events of activity.
  - 4. Immediate preceding and succeeding activities.
  - 5. Early and late start dates.
  - 6. Early and late finish dates.
  - 7. Activity duration in workdays.
  - 8. Total float or slack time.
  - 9. Average size of workforce.
  - 10. Dollar value of activity (coordinated with the schedule of values).
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
  - 1. Identification of activities that have changed.
  - 2. Changes in early and late start dates.
  - 3. Changes in early and late finish dates.
  - 4. Changes in activity durations in workdays.
  - 5. Changes in the critical path.
  - 6. Changes in total float or slack time.
  - 7. Changes in the Contract Time.
- H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.
  - 1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
  - 2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
  - 3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
  - 4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.

## 1.8 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
  - 1. Approximate count of personnel at Project site.
  - 2. Material deliveries.
  - 3. High and low temperatures and general weather conditions, including presence of rain or snow.
  - 4. Accidents.
  - 5. Meetings and significant decisions.
  - 6. Unusual events.
  - 7. Stoppages, delays, shortages, and losses.

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- 8. Emergency procedures.
- 9. Orders and requests of authorities having jurisdiction.
- 10. Change Orders received and implemented.
- 11. Construction Change Directives received and implemented.
- 12. Partial completions and occupancies.
- 13. Substantial Completions authorized.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013200** 

### SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
  - 1. Preconstruction photographs.
  - 2. Concealed Work photographs.
  - 3. Periodic construction photographs.
- B. Related Requirements:
  - 1. Section 017700 "Closeout Procedures" for submitting photographic documentation as Project Record Documents at Project closeout.
  - 2. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

## 1.3 INFORMATIONAL SUBMITTALS

- A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.
- B. Digital Photographs: Submit image files within three days of taking photographs.
  - 1. Submit photos on CD-ROM or thumb-drive. Include copy of key plan indicating each photograph's location and direction.
  - 2. Identification: Provide the following information with each image description:
    - a. Name of Project.
    - b. Name of Contractor.
    - c. Date photograph was taken.
    - d. Description of location, vantage point, and direction.

### 1.4 FORMATS AND MEDIA

A. File Names: Name media files with date Project area and sequential numbering suffix.

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# 1.5 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs with maximum depth of field and in focus.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- B. Preconstruction Photographs: Before commencement of the Work, take photographs of Project site and objects within project extents, including existing items to remain during construction, from different vantage points, as directed by Architect.
  - 1. Take a minimum of 20 photographs of existing building and conditions to accurately record physical conditions at start of construction.
  - 2. The Contractor is required to take pictures of items considered to be damaged, prior to starting full construction activities; and submit them to the Housing Project Manager for review and record documentation. Otherwise, all items are considered to be new and in pristine condition. Any repairs required at the end of the project, to damaged items or area, will be the responsibility of the General Contractor, unless previously documented and acknowledged by Owner.
- C. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficient in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:
  - 1. Waterproofing and weather-resistant barriers.
- D. Periodic Construction Photographs: Take 20 photographs weekly. Select vantage points to show status of construction and progress since last photographs were taken.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013233** 

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### **SECTION 013300 - SUBMITTAL PROCEDURES**

### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

### A. Section Includes:

- 1. Submittal schedule requirements.
- 2. Administrative and procedural requirements for submittals.

## B. Related Requirements:

- 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
- 2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
- 3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
- 4. Section 013233 "Photographic Documentation" for submitting preconstruction photographs, periodic construction photographs, and Final Completion construction photographs.
- 5. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
- 6. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
- 7. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
- 8. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

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## 1.4 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
  - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  - 2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  - 3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
  - 4. Format: Arrange the following information in a tabular format:
    - a. Scheduled date for first submittal.
    - b. Specification Section number and title.
    - c. Submittal Category: Action; informational.
    - d. Name of subcontractor.
    - e. Description of the Work covered.
    - f. Scheduled date for Architect's final release or approval.
    - g. Scheduled dates for purchasing.
    - h. Scheduled date of fabrication.
    - i. Scheduled dates for installation.
    - j. Activity or event number.

# 1.5 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
  - 1. Project name.
  - 2. Date.
  - 3. Name of Architect.
  - 4. Name of Contractor.
  - 5. Name of firm or entity that prepared submittal.
  - 6. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
  - 7. Category and type of submittal.
  - 8. Submittal purpose and description.
  - 9. Drawing number and detail references, as appropriate.
  - 10. Indication of full or partial submittal.
  - 11. Location(s) where product is to be installed, as appropriate.

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- 12. Remarks.
- 13. Signature of transmitter.
- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

# D. Paper Submittals:

- 1. Place a permanent label or title block on each submittal item for identification; include name of firm or entity that prepared submittal.
- 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
- 3. Action Submittals: Submit four paper copies of each submittal unless otherwise indicated. Architect will return two copies.
- 4. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Architect will not return copies.
- 5. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- 6. Transmittal for Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using AIA Document G810 transmittal form.
- E. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

# 1.6 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
  - 1. Email: Prepare submittals as PDF package and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
    - a. Architect will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.
  - 2. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
  - 3. Paper: Prepare submittals in paper form and deliver to Architect.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

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- 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
- 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
- 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
- 4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
  - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - 1. Initial Review: Allow 7 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  - 3. Resubmittal Review: Must be submitted within five (5) days. Allow 5 days for review of each resubmittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
  - 1. Note date and content of previous submittal.
  - 2. Note date and content of revision in label or title block, and clearly indicate extent of revision
  - 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

# 1.7 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.

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- 3. Include the following information, as applicable:
  - a. Manufacturer's catalog cuts.
  - b. Manufacturer's product specifications.
  - c. Standard color charts.
- 4. For equipment, include the following in addition to the above, as applicable:
  - a. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
- 5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.
  - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Notation of coordination requirements.
    - d. Notation of dimensions established by field measurement.
  - 2. Paper Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
    - a. Three opaque copies of each submittal. Architect will retain two copies; remainder will be returned.
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
  - 1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
  - 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
    - a. Project name and submittal number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
    - e. Number and title of applicable Specification Section.
    - f. Specification paragraph number and generic name of each item.
  - 3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics and identification information for record.
  - 4. Paper Transmittal: Include paper transmittal, including complete submittal information indicated.

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- 5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
  - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
  - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- 6. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
  - a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
- 7. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - a. Number of Samples: Submit four sets of Samples. Architect will retain three Sample sets; remainder will be returned.
    - 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- E. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

# F. Certificates:

Certificates and Certifications Submittals: Submit a statement that includes signature
of entity responsible for preparing certification. Certificates and certifications shall be
signed by an officer or other individual authorized to sign documents on behalf of
that entity. Provide a notarized signature where indicated.

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2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

#### 1.8 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
  - 1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

### 1.9 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required.
  - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
  - 2. Paper Submittals: Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect will return without review submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.
- G. Until written approval from the Owner's Representative/Architect has been given for each product, products or materials must not be purchased, fabricated or incorporated into the work.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

# **SECTION 014000 - QUALITY REQUIREMENTS**

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

#### 1.3 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
  - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

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- D. Mockups: Full-size physical assemblies that are constructed either as freestanding temporary built elements or as part of permanent construction. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
  - Room Mockups: Mockups of typical interior spaces complete with wall and floor finishes.
  - 2. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" shall have the same meaning as the term "testing agency."
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

## 1.4 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with

the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

# 1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Contractor's quality-control personnel.

## 1.6 QUALITY ASSURANCE

- A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
  - 1. Non-conforming materials or installation shall result in rejection of the entire installation until replaced in accordance with the specifications. Replacement of non-conforming work shall be at the sole cost of the Contractor.
- D. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups of size indicated.
  - 2. Build mockups in location indicated or, if not indicated, as directed by Architect.
  - 3. Notify Architect four days in advance of dates and times when mockups will be constructed.
  - 4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
  - 5. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 6. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.
    - a. Allow four days for initial review and each re-review of each mockup.
  - 7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.

- 8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
- 9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
- 10. Demolish and remove mockups when directed unless otherwise indicated.
- E. Room Mockups: Construct room mockups as indicated on Drawings, incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable Architect to evaluate quality of the Work. Comply with requirements in "Mockups" Paragraph.
  - 1. Provide room mockups of the following rooms:
    - a. Room 1602 LVT-1, RB-2
    - b. Room 1604 LVT-1, RB-2
    - c. Corridor at 16<sup>th</sup> Floor- +/-400SF at Intersection of CPT- 7A and CPT-7B, RB-1
    - d. ST03- Stair Landing ST-1; RF-1
    - e. Room 109- (Frist Floor Lobby)- +/-500SF at the front edge of the exiting reception desk. Dry lay tile in pattern with chalk lines prior to grouting. Architect would like to observe dry lay prior to grouting of PT-2 and PT-3.
    - f. Room 109- (First Floor Lobby)- +/-250 SF of the recess CPT 3 in herringbone pattern. Architect would like to observe dry lay and finished edge condition prior to grouting/adhesive.

# 1.7 QUALITY CONTROL

- A. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- B. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- C. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
  - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

# 3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.
  - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION 014000** 

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## **SECTION 014200 - REFERENCES**

### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

## 1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

### 1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as

if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

## 1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.
  - 1. AABC Associated Air Balance Council; www.aabc.com.
  - 2. AAMA American Architectural Manufacturers Association; www.aamanet.org.
  - 3. AAPFCO Association of American Plant Food Control Officials; www.aapfco.org.
  - 4. AASHTO American Association of State Highway and Transportation Officials; www.transportation.org.
  - 5. AATCC American Association of Textile Chemists and Colorists; www.aatcc.org.
  - 6. ABMA American Bearing Manufacturers Association; www.americanbearings.org.
  - 7. ABMA American Boiler Manufacturers Association; www.abma.com.
  - 8. ACI American Concrete Institute; (Formerly: ACI International); www.concrete.org.
  - 9. ACPA American Concrete Pipe Association; www.concrete-pipe.org.
  - 10. AEIC Association of Edison Illuminating Companies, Inc. (The): www.aeic.org.
  - 11. AF&PA American Forest & Paper Association; www.afandpa.org.
  - 12. AGA American Gas Association; www.aga.org.
  - 13. AHAM Association of Home Appliance Manufacturers; www.aham.org.
  - 14. AHRI Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
  - 15. AI Asphalt Institute; www.asphaltinstitute.org.
  - 16. AIA American Institute of Architects (The); www.aia.org.
  - 17. AISC American Institute of Steel Construction; www.aisc.org.
  - 18. AISI American Iron and Steel Institute; www.steel.org.
  - 19. AITC American Institute of Timber Construction; www.aitc-glulam.org.
  - 20. AMCA Air Movement and Control Association International, Inc.; www.amca.org.
  - 21. ANSI American National Standards Institute; www.ansi.org.
  - 22. AOSA Association of Official Seed Analysts, Inc.; www.aosaseed.com.
  - 23. APA APA The Engineered Wood Association; www.apawood.org.
  - 24. APA Architectural Precast Association; www.archprecast.org.
  - 25. API American Petroleum Institute; www.api.org.
  - 26. ARI Air-Conditioning & Refrigeration Institute; (See AHRI).
  - 27. ARI American Refrigeration Institute; (See AHRI).
  - 28. ARMA Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
  - 29. ASCE American Society of Civil Engineers; www.asce.org.
  - 30. ASCE/SEI American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
  - 31. ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.

- 32. ASME ASME International; (American Society of Mechanical Engineers); www.asme.org.
- 33. ASSE American Society of Safety Engineers (The); www.asse.org.
- 34. ASSE American Society of Sanitary Engineering; www.asse-plumbing.org.
- 35. ASTM ASTM International; www.astm.org.
- 36. ATIS Alliance for Telecommunications Industry Solutions; www.atis.org.
- 37. AWEA American Wind Energy Association; www.awea.org.
- 38. AWI Architectural Woodwork Institute; www.awinet.org.
- 39. AWMAC Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
- 40. AWPA American Wood Protection Association; www.awpa.com.
- 41. AWS American Welding Society; www.aws.org.
- 42. AWWA American Water Works Association; www.awwa.org.
- 43. BHMA Builders Hardware Manufacturers Association; www.buildershardware.com.
- 44. BIA Brick Industry Association (The); www.gobrick.com.
- 45. BICSI BICSI, Inc.; www.bicsi.org.
- 46. BIFMA BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.org.
- 47. BISSC Baking Industry Sanitation Standards Committee; www.bissc.org.
- 48. BWF Badminton World Federation; (Formerly: International Badminton Federation); www.bissc.org.
- 49. CDA Copper Development Association; www.copper.org.
- 50. CE Conformite Europeenne; http://ec.europa.eu/growth/single-market/ce-marking/.
- 51. CEA Canadian Electricity Association; www.electricity.ca.
- 52. CEA Consumer Electronics Association; www.ce.org.
- 53. CFFA Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
- 54. CFSEI Cold-Formed Steel Engineers Institute; www.cfsei.org.
- 55. CGA Compressed Gas Association; www.cganet.com.
- 56. CIMA Cellulose Insulation Manufacturers Association; www.cellulose.org.
- 57. CISCA Ceilings & Interior Systems Construction Association; www.cisca.org.
- 58. CISPI Cast Iron Soil Pipe Institute; www.cispi.org.
- 59. CLFMI Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
- 60. CPA Composite Panel Association; www.pbmdf.com.
- 61. CRI Carpet and Rug Institute (The); www.carpet-rug.org.
- 62. CRRC Cool Roof Rating Council; www.coolroofs.org.
- 63. CRSI Concrete Reinforcing Steel Institute; www.crsi.org.
- 64. CSA CSA Group; www.csagroup.com.
- 65. CSA CSA International; www.csa-international.org.
- 66. CSI Construction Specifications Institute (The); www.csinet.org.
- 67. CSSB Cedar Shake & Shingle Bureau; www.cedarbureau.org.
- 68. CTI Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
- 69. CWC Composite Wood Council; (See CPA).
- 70. DASMA Door and Access Systems Manufacturers Association; www.dasma.com.
- 71. DHI Door and Hardware Institute; www.dhi.org.
- 72. ECA Electronic Components Association; (See ECIA).
- 73. ECAMA Electronic Components Assemblies & Materials Association; (See ECIA).
- 74. ECIA Electronic Components Industry Association; www.eciaonline.org.
- 75. EIA Electronic Industries Alliance; (See TIA).
- 76. EIMA EIFS Industry Members Association; www.eima.com.
- 77. EJMA Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
- 78. ESD ESD Association; (Electrostatic Discharge Association); www.esda.org.

- 79. ESTA Entertainment Services and Technology Association; (See PLASA).
- 80. ETL Intertek (See Intertek); www.intertek.com.
- 81. EVO Efficiency Valuation Organization; www.evo-world.org.
- 82. FCI Fluid Controls Institute; www.fluidcontrolsinstitute.org.
- 83. FIBA Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
- 84. FIVB Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
- 85. FM Approvals FM Approvals LLC; www.fmglobal.com.
- 86. FM Global FM Global; (Formerly: FMG FM Global); www.fmglobal.com.
- 87. FRSA Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
- 88. FSA Fluid Sealing Association; www.fluidsealing.com.
- 89. FSC Forest Stewardship Council U.S.; www.fscus.org.
- 90. GA Gypsum Association; www.gypsum.org.
- 91. GANA Glass Association of North America; www.glasswebsite.com.
- 92. GS Green Seal; www.greenseal.org.
- 93. HI Hydraulic Institute; www.pumps.org.
- 94. HI/GAMA Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
- 95. HMMA Hollow Metal Manufacturers Association; (See NAAMM).
- 96. HPVA Hardwood Plywood & Veneer Association; www.hpva.org.
- 97. HPW H. P. White Laboratory, Inc.; www.hpwhite.com.
- 98. IAPSC International Association of Professional Security Consultants; www.iapsc.org.
- 99. IAS International Accreditation Service; www.iasonline.org.
- 100. ICBO International Conference of Building Officials; (See ICC).
- 101. ICC International Code Council; www.iccsafe.org.
- 102. ICEA Insulated Cable Engineers Association, Inc.; www.icea.net.
- 103. ICPA International Cast Polymer Alliance; www.icpa-hg.org.
- 104. ICRI International Concrete Repair Institute, Inc.; www.icri.org.
- 105. IEC International Electrotechnical Commission; www.iec.ch.
- 106. IEEE Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
- 107. IES Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
- 108. IESNA Illuminating Engineering Society of North America; (See IES).
- 109. IEST Institute of Environmental Sciences and Technology; www.iest.org.
- 110. IGMA Insulating Glass Manufacturers Alliance; www.igmaonline.org.
- 111. IGSHPA International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
- 112. ILI Indiana Limestone Institute of America, Inc.; www.iliai.com.
- 113. Intertek Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
- 114. ISA International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
- 115. ISAS Instrumentation, Systems, and Automation Society (The); (See ISA).
- 116. ISFA International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
- 117. ISO International Organization for Standardization; www.iso.org.
- 118. ISSFA International Solid Surface Fabricators Association; (See ISFA).
- 119. ITU International Telecommunication Union: www.itu.int/home.
- 120. KCMA Kitchen Cabinet Manufacturers Association; www.kcma.org.
- 121. LMA Laminating Materials Association; (See CPA).

- 122. LPI Lightning Protection Institute; www.lightning.org.
- 123. MBMA Metal Building Manufacturers Association; www.mbma.com.
- 124. MCA Metal Construction Association; www.metalconstruction.org.
- 125. MFMA Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
- 126. MFMA Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
- 127. MHIA Material Handling Industry of America; www.mhia.org.
- 128. MIA Marble Institute of America; www.marble-institute.com.
- 129. MMPA Moulding & Millwork Producers Association; www.wmmpa.com.
- 130. MPI Master Painters Institute; www.paintinfo.com.
- 131. MSS Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
- 132. NAAMM National Association of Architectural Metal Manufacturers; www.naamm.org.
- 133. NACE NACE International; (National Association of Corrosion Engineers International); www.nace.org.
- 134. NADCA National Air Duct Cleaners Association; www.nadca.com.
- 135. NAIMA North American Insulation Manufacturers Association; www.naima.org.
- 136. NBGQA National Building Granite Quarries Association, Inc.; www.nbgqa.com.
- 137. NBI New Buildings Institute; www.newbuildings.org.
- 138. NCAA National Collegiate Athletic Association (The); www.ncaa.org.
- 139. NCMA National Concrete Masonry Association; www.ncma.org.
- 140. NEBB National Environmental Balancing Bureau; www.nebb.org.
- 141. NECA National Electrical Contractors Association; www.necanet.org.
- 142. NeLMA Northeastern Lumber Manufacturers Association; www.nelma.org.
- 143. NEMA National Electrical Manufacturers Association; www.nema.org.
- 144. NETA InterNational Electrical Testing Association; www.netaworld.org.
- 145. NFHS National Federation of State High School Associations; www.nfhs.org.
- 146. NFPA National Fire Protection Association; www.nfpa.org.
- 147. NFPA NFPA International; (See NFPA).
- 148. NFRC National Fenestration Rating Council; www.nfrc.org.
- 149. NHLA National Hardwood Lumber Association; www.nhla.com.
- 150. NLGA National Lumber Grades Authority; www.nlga.org.
- 151. NOFMA National Oak Flooring Manufacturers Association; (See NWFA).
- 152. NOMMA National Ornamental & Miscellaneous Metals Association; www.nomma.org.
- 153. NRCA National Roofing Contractors Association; www.nrca.net.
- 154. NRMCA National Ready Mixed Concrete Association; www.nrmca.org.
- 155. NSF NSF International; www.nsf.org.
- 156. NSPE National Society of Professional Engineers; www.nspe.org.
- 157. NSSGA National Stone, Sand & Gravel Association; www.nssga.org.
- 158. NTMA National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
- 159. NWFA National Wood Flooring Association; www.nwfa.org.
- 160. PCI Precast/Prestressed Concrete Institute; www.pci.org.
- 161. PDI Plumbing & Drainage Institute; www.pdionline.org.
- 162. PLASA PLASA; (Formerly: ESTA Entertainment Services and Technology Association); www.plasa.org.
- 163. RCSC Research Council on Structural Connections; www.boltcouncil.org.
- 164. RFCI Resilient Floor Covering Institute; www.rfci.com.
- 165. RIS Redwood Inspection Service; www.redwoodinspection.com.
- 166. SAE SAE International; www.sae.org.
- 167. SCTE Society of Cable Telecommunications Engineers; www.scte.org.

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- 168. SDI Steel Deck Institute; www.sdi.org.
- 169. SDI Steel Door Institute; www.steeldoor.org.
- 170. SEFA Scientific Equipment and Furniture Association (The); www.sefalabs.com.
- 171. SEI/ASCE Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
- 172. SIA Security Industry Association; www.siaonline.org.
- 173. SJI Steel Joist Institute; www.steeljoist.org.
- 174. SMA Screen Manufacturers Association; www.smainfo.org.
- 175. SMACNA Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
- 176. SMPTE Society of Motion Picture and Television Engineers; www.smpte.org.
- 177. SPFA Spray Polyurethane Foam Alliance; www.sprayfoam.org.
- 178. SPIB Southern Pine Inspection Bureau; www.spib.org.
- 179. SPRI Single Ply Roofing Industry; www.spri.org.
- 180. SRCC Solar Rating & Certification Corporation; www.solar-rating.org.
- 181. SSINA Specialty Steel Industry of North America; www.ssina.com.
- 182. SSPC SSPC: The Society for Protective Coatings; www.sspc.org.
- 183. STI Steel Tank Institute; www.steeltank.com.
- 184. SWI Steel Window Institute; www.steelwindows.com.
- 185. SWPA Submersible Wastewater Pump Association; www.swpa.org.
- 186. TCA Tilt-Up Concrete Association; www.tilt-up.org.
- 187. TCNA Tile Council of North America, Inc.; www.tileusa.com.
- 188. TEMA Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
- 189. TIA Telecommunications Industry Association (The); (Formerly: TIA/EIA Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
- 190. TIA/EIA Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
- 191. TMS The Masonry Society; www.masonrysociety.org.
- 192. TPI Truss Plate Institute; www.tpinst.org.
- 193. TPI Turfgrass Producers International; www.turfgrasssod.org.
- 194. TRI Tile Roofing Institute; www.tileroofing.org.
- 195. UL Underwriters Laboratories Inc.; www.ul.com.
- 196. UNI Uni-Bell PVC Pipe Association; www.uni-bell.org.
- 197. USAV USA Volleyball; www.usavolleyball.org.
- 198. USGBC U.S. Green Building Council; www.usgbc.org.
- 199. USITT United States Institute for Theatre Technology, Inc.; www.usitt.org.
- 200. WA Wallcoverings Association; www.wallcoverings.org.
- 201. WASTEC Waste Equipment Technology Association; www.wastec.org.
- 202. WCLIB West Coast Lumber Inspection Bureau; www.wclib.org.
- 203. WCMA Window Covering Manufacturers Association; www.wcmanet.org.
- 204. WDMA Window & Door Manufacturers Association; www.wdma.com.
- 205. WI Woodwork Institute; www.wicnet.org.
- 206. WSRCA Western States Roofing Contractors Association; www.wsrca.com.
- 207. WWPA Western Wood Products Association; www.wwpa.org.
- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.
  - 1. DIN Deutsches Institut für Normung e.V.; www.din.de.

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- 2. IAPMO International Association of Plumbing and Mechanical Officials; www.iapmo.org.
- 3. ICC International Code Council; www.iccsafe.org.
- 4. ICC-ES ICC Evaluation Service, LLC; www.icc-es.org.
- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.
  - 1. COE Army Corps of Engineers; www.usace.army.mil.
  - 2. CPSC Consumer Product Safety Commission; www.cpsc.gov.
  - 3. DOC Department of Commerce; National Institute of Standards and Technology; www.nist.gov.
  - 4. DOD Department of Defense; www.quicksearch.dla.mil.
  - 5. DOE Department of Energy; www.energy.gov.
  - 6. EPA Environmental Protection Agency; www.epa.gov.
  - 7. FAA Federal Aviation Administration; www.faa.gov.
  - 8. FG Federal Government Publications; www.gpo.gov/fdsys.
  - 9. GSA General Services Administration; www.gsa.gov.
  - 10. HUD Department of Housing and Urban Development; www.hud.gov.
  - 11. LBL Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; www.eetd.lbl.gov.
  - 12. OSHA Occupational Safety & Health Administration; www.osha.gov.
  - 13. SD Department of State; www.state.gov.
  - 14. TRB Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.
  - 15. USDA Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.
  - 16. USDA Department of Agriculture; Rural Utilities Service; www.usda.gov.
  - 17. USDOJ Department of Justice; Office of Justice Programs; National Institute of Justice; www.ojp.usdoj.gov.
  - 18. USP U.S. Pharmacopeial Convention; www.usp.org.
  - 19. USPS United States Postal Service; www.usps.com.
- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
  - 1. CFR Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
  - 2. DOD Department of Defense; Military Specifications and Standards; Available from DLA Document Services; www.quicksearch.dla.mil.
  - 3. DSCC Defense Supply Center Columbus; (See FS).
  - 4. FED-STD Federal Standard; (See FS).
  - 5. FS Federal Specification; Available from DLA Document Services; www.quicksearch.dla.mil.
    - a. Available from Defense Standardization Program; www.dsp.dla.mil.
    - b. Available from General Services Administration; www.gsa.gov.

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- c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org.
- 6. MILSPEC Military Specification and Standards; (See DOD).
- 7. USAB United States Access Board; www.access-board.gov.
- 8. USATBCB U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).
- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.
  - 1. CBHF; State of California; Department of Consumer Affairs; Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; www.bearhfti.ca.gov.
  - 2. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.calregs.com.
  - 3. CDHS; California Department of Health Services; (See CDPH).
  - 4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.caliaq.org.
  - 5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
  - 6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.
  - 7. TFS; Texas A&M Forest Service; Sustainable Forestry and Economic Development; www.txforestservice.tamu.edu.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 014200** 

### SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

# B. Related Requirements:

- 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.
- 2. Section 012100 "Allowances" for allowance for metered use of temporary utilities.

# 1.3 INFORMATIONAL SUBMITTALS

- A. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - Waste-handling procedures.
  - 5. Other dust-control measures.

# 1.4 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.
- B. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches.

## 2.2 TEMPORARY FACILITIES

A. Field Offices: Owner will provide conditioned interior space for field offices for duration of Project.

### PART 3 - EXECUTION

## 3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

# 3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

# 3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

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- 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- C. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

# 3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

**END OF SECTION 015000** 

# **SECTION 016000 - PRODUCT REQUIREMENTS**

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

# B. Related Requirements:

- Section 011000 "Summary" for Contractor requirements related to Owner-furnished products.
- 2. Section 012100 "Allowances" for products selected under an allowance.
- 3. Section 012500 "Substitution Procedures" for requests for substitutions.
- 4. Section 014200 "References" for applicable industry standards for products specified.
- 5. Section 01770 "Closeout Procedures" for submitting warranties.

#### 1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
  - 3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make

or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.

- 1. Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.
- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.
- D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:
  - 1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
  - 2. Data indicating compliance with the requirements specified in Part 2 "Comparable Products" Article.
- E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."
- F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

# 1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.

# 1.5 COORDINATION

A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

# 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

# B. Delivery and Handling:

- 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
- 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
- 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- 4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.
- 5. The Contractor is responsible for delivery of flooring and the safe transport throughout the building, as well as, the installation (without damage to the University's property, equipment, and personnel). The Contractor is liable for all injury, damage, or loss to persons and property.
- 6. It is the Contractor's responsibility to communicate any delay in material delivery resulting in schedule modifications immediately to the Architect and Owner (and/or designated representatives).

# C. Storage:

- 1. Provide a secure location and enclosure at Project site for storage of materials and equipment. Prior to installation, all flooring and related material storage must be the responsibility of the Contractor.
- 2. Store products to allow for inspection and measurement of quantity or counting of units.
- 3. Store materials in a manner that will not endanger Project structure.
- 4. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation and with adequate protection from wind.
- 5. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
- 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
- 7. Protect stored products from damage and liquids from freezing.
- 8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

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9. On site, all materials, tools and equipment used by the Contractor must be stored in a place designated by the University Housing Project Manager. Materials must be arranged in a neat and orderly manner, as to not affect in any way, any of the terms and conditions in the contract or to block exits.

# 1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.
  - 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of the Owner or endorsed by manufacturer to Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  - 2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
  - 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

#### **PART 2 - PRODUCTS**

# 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
  - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  - 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
  - 4. Where products are accompanied by the term "as selected," Architect will make selection.

- 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- 6. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
  - a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by the Architect, whose determination is final.

# B. Product Selection Procedures:

- 1. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
  - a. Limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, provide products by one of the following."
- 2. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
  - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.

#### 2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
  - 1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
  - 2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
  - 3. Evidence that proposed product provides specified warranty.
  - 4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
  - 5. Samples, if requested.

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- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."
  - 1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
  - 2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- C. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

PART 3 - EXECUTION (Not Used)

**END OF SECTION 016000** 

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#### **SECTION 017300 - EXECUTION**

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
  - 1. Installation of the Work.
  - 2. Cutting and patching.
  - 3. Coordination of Owner's portion of the Work.
  - 4. Coordination of Owner-installed products.
  - 5. Progress cleaning.
  - 6. Starting and adjusting.
  - 7. Protection of installed construction.

# B. Related Requirements:

- 1. Section 011000 "Summary" for coordination of Owner-furnished products, Owner-performed work, Owner's separate contracts, and limits on use of Project site.
- 2. Section 013300 "Submittal Procedures" for submitting surveys.
- 3. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
- 4. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

# 1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

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# 1.4 QUALITY ASSURANCE

A. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

#### **PART 2 - PRODUCTS**

#### 2.1 MATERIALS

- A. Comply with requirements specified in other Sections.
  - 1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

#### PART 3 - EXECUTION

# 3.1 EXAMINATION

- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

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- B. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - 1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
  - 2. List of detrimental conditions, including substrates.
  - 3. List of unacceptable installation tolerances.
  - 4. Recommended corrections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

# 3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination."

# 3.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb, and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. The Contractor is responsible for delivery of flooring and the safe transport throughout the building, as well as, the installation (without damage to the University's property, equipment, and personnel). The Contractor is liable for all injury, damage, or loss to persons and property. The project must be carried out entirely at the Contractor's risk and the University assumes no responsibility or obligation.
- C. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- D. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.

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- E. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- F. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- G. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- H. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- I. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
- J. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.
- K. Repair or remove and replace damaged, defective, or nonconforming Work.
  - 1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

#### 3.4 CUTTING AND PATCHING

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

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- D. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
- E. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.
  - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.
- F. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

# 3.5 COORDINATION OF OWNER'S PORTION OF THE WORK

- A. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel and Owner's separate contractors.
  - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.

#### 3.6 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    - a. Use containers intended for holding waste materials of type to be stored.
  - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
  - 3. Remove all project debris inside the building daily.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

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- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

#### 3.7 PROTECTION AND REPAIR OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- D. Comply with manufacturer's written instructions for temperature and relative humidity.

**END OF SECTION 017300** 

#### SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
  - 1. Disposing of nonhazardous demolition and construction waste.

#### 1.3 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
- C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

# 1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition and construction waste becomes property of Contractor.

# **PART 2 - PRODUCTS**

# 2.1 PERFORMANCE REQUIREMENTS

- A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total nonhazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials., including the following:
  - 1. Demolition Waste:
    - a. Carpet.
    - b. Carpet pad.
    - c. Resilient Base and Accessories.

#### 2. Construction Waste:

- a. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
  - 1) Paper.
  - 2) Cardboard.
  - 3) Boxes.
  - 4) Plastic sheet and film.
  - 5) Polystyrene packaging.
  - 6) Wood crates.
  - 7) Wood pallets.
  - 8) Plastic pails.
- b. Construction Office Waste: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following construction office waste materials:
  - 1) Paper.
  - 2) Aluminum cans.
  - 3) Glass containers.

#### PART 3 - EXECUTION

# 3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

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- 1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."
- B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
  - 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

# 3.2 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.

**END OF SECTION 017419** 

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#### SECTION 017700 - CLOSEOUT PROCEDURES

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.

# B. Related Requirements:

- 1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.
- 2. Section 013233 "Photographic Documentation" for submitting Final Completion construction photographic documentation.
- 3. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
- 4. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
- 5. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

# 1.3 DEFINITIONS

A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

#### 1.4 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- B. Certified List of Incomplete Items: Final submittal at Final Completion.

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C. Schedule of Intended Documents and Items for Close-Out Documents to be submitted for Architect's Review: Initial submittal concurrent with initial project schedule

# 1.5 CLOSEOUT SUBMITTALS

A. Field Report: For pest-control inspection.

#### 1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

#### 1.7 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
  - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
  - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Owner. Label with manufacturer's name and model number.
    - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of submittals.
  - 5. Submit testing, adjusting, and balancing records.
  - 6. Submit sustainable design submittals not previously submitted.
  - 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify

CLOSEOUT PROCEDURES SECTION 017700 - 2

Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

- 1. Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
- 2. Results of completed inspection will form the basis of requirements for Final Completion.
- 3. Following substantial completion of each floor (from top down), each floor will be turned over to USC Housing Facilities Operation's staff to complete their summer programs.

# 1.8 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
  - 1. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

# 1.9 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, proceeding from lowest floor to highest floor, listed by room or space number.
  - 2. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Page number.

- 3. Submit list of incomplete items in the following format:
  - a. PDF Electronic File: Architect will return annotated file.

#### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
  - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

# **PART 3 - EXECUTION**

#### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - e. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

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- f. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations. Resident room floors and common areas shall be "Move-In" ready condition.
- g. Vacuum and mop concrete.
- h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain. Resident room floors and common areas shall be "Move-In" ready condition.
- i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces. Resident room floors and common areas shall be "Move-In" ready condition.
- j. Remove labels that are not permanent.
- k. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
- I. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure. Resident room floors and common areas shall be "Move-In" ready condition.
- m. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
- n. Clean strainers.
- o. Leave Project clean and ready for occupancy. All resident room floors and common areas shall be "Move-In" ready condition.

# 3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

**END OF SECTION 017700** 

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#### SECTION 017823 - OPERATION AND MAINTENANCE DATA

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory manuals.
  - 2. Systems and equipment operation manuals.
  - 3. Systems and equipment maintenance manuals.
  - 4. Product maintenance manuals.

# B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

#### 1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

# 1.4 CLOSEOUT SUBMITTALS

- A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. Architect will comment on whether content of operation and maintenance submittals is acceptable.
  - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operation and maintenance manuals in the following format:

- 1. Submit by email to Architect. Enable reviewer comments on draft submittals.
- 2. Submit three paper copies. Architect will return one copy.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
  - 1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.
- D. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

#### 1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
  - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  - 2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- B. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.
  - 1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
  - 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

- 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
- 4. Supplementary Prepared on 8-1/2-by-11-inch white bond paper.
- 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
  - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
  - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

# 1.6 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  - 1. Title page.
  - 2. Table of contents.
  - 3. Manual contents.
- B. Title Page: Include the following information:
  - 1. Subject matter included in manual.
  - 2. Name and address of Project.
  - 3. Name and address of Owner.
  - 4. Date of submittal.
  - 5. Name and contact information for Contractor.
  - Name and contact information for Architect.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

# 1.7 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY MANUAL

A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals. List items and their location to facilitate ready access to desired information. Include the following:

- 1. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- 2. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- 3. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

# 1.8 PRODUCT MAINTENANCE MANUALS

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - Color, pattern, and texture.
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Types of cleaning agents to be used and methods of cleaning.
  - 2. List of cleaning agents and methods of cleaning detrimental to product.
  - 3. Schedule for routine cleaning and maintenance.
- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 017823** 

#### SECTION 017839 - PROJECT RECORD DOCUMENTS

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record specifications.
  - 3. Record Product Data.
  - Miscellaneous record submittals.

# B. Related Requirements:

- 1. Section 017300 "Execution" for final property survey.
- 2. Section 017700 "Closeout Procedures" for general closeout procedures.
- 3. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

# 1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit three set(s) of marked-up record prints.
  - 2. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Final Submittal:
      - 1) Submit three paper-copy set(s) of marked-up record prints.
      - 2) Submit PDF electronic files of scanned Record Prints and three set(s) of file prints.
      - 3) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files and three paper copies of Project's Specifications, including addenda and Contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files and directories and three paper copies of each submittal.

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- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories and three paper copies of each submittal.
- E. Reports: Submit written report weekly indicating items incorporated into Project Record Documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

#### 1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding photographic documentation.
  - 2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Changes made by Change Order or Construction Change Directive.
    - d. Changes made following Architect's written orders.
    - e. Details not on the original Contract Drawings.
    - f. Field records for variable and concealed conditions.
    - g. Record information on the Work that is shown only schematically.
  - 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  - 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  - 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

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- 1. Format: Annotated PDF electronic file with comment function enabled.
- 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
- 3. Refer instances of uncertainty to Architect for resolution.
- 4. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.
  - a. See Section 013100 "Project Management and Coordination" for requirements related to use of Architect's digital data files.
  - b. Architect will provide data file layer information. Record markups in separate layers.
- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  - 1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - 2. Format: Annotated PDF electronic file with comment function enabled.
  - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  - 4. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect.
    - e. Name of Contractor.

# 1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  - 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
  - 5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file.

# 1.6 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  - 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
- C. Format: Submit Record Product Data as annotated PDF electronic file.
  - 1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

# 1.7 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file.
  - 1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

# 1.8 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 017839** 

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#### SECTION 017900 - DEMONSTRATION AND TRAINING

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Instruction in operation and maintenance of systems, subsystems, and equipment.
- B. Allowances: Furnish demonstration and training instruction time under the demonstration and training allowance as specified in Section 012100 "Allowances."
- C. Unit Price for Instruction Time: Length of instruction time will be measured by actual time spent performing demonstration and training in required location. No payment will be made for time spent assembling educational materials, setting up, or cleaning up. See requirements in Section 012200 "Unit Prices."

# 1.3 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

# 1.4 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data have been reviewed and approved by Architect.

# 1.5 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
  - 1. Documentation: Review the following items in detail:
    - a. Emergency manuals.
    - b. Systems and equipment operation manuals.
    - c. Systems and equipment maintenance manuals.
    - d. Product maintenance manuals.
    - e. Project Record Documents.
    - f. Identification systems.
    - g. Warranties and bonds.
    - h. Maintenance service agreements and similar continuing commitments.
  - 2. Maintenance: Include the following:
    - a. Inspection procedures.
    - b. Types of cleaning agents to be used and methods of cleaning.
    - c. List of cleaning agents and methods of cleaning detrimental to product.
    - d. Procedures for routine cleaning.
    - e. Procedures for preventive maintenance.
    - f. Procedures for routine maintenance.
    - g. Instruction on use of special tools.

#### 1.6 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."
- B. Set up instructional equipment at instruction location.

# 1.7 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

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- 1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
- 2. Owner will furnish an instructor to describe Owner's operational philosophy.
- 3. Owner will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  - 1. Schedule training with Owner with at least seven days' advance notice.
- D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- E. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 017900** 

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#### **SECTION 024119 - SELECTIVE DEMOLITION**

#### PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

# 1.2 SUMMARY

- A. Section Includes:
  - 1. Demolition and removal of selected flooring finish elements.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
  - 2. Section 017300 "Execution" for cutting and patching procedures.

### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

### 1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

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# 1.5 FIELD CONDITIONS

- A. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Hazardous Materials: It is expected that hazardous materials will be encountered in the Work.
  - 1. Hazardous materials will be removed by Owner (under separate contract) before start of the Work.
  - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- C. Hazardous Materials: Present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
  - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
  - 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
  - 3. Owner will provide material safety data sheets for suspected hazardous materials that are known to be present in buildings and structures to be selectively demolished because of building operations or processes performed there.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

#### 1.6 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

# PART 2 - PRODUCTS

# 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

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## **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- B. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

## 3.2 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- B. Remove temporary barricades and protections where hazards no longer exist.

# 3.3 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 4. 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

SELECTIVE DEMOLITION SECTION 024119 - 3

hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.

- 5. The Contactor must protect all fire safety equipment and detection systems, keeping it free of debris, dust, paint, caulking, adhesives, etc.
- 6. Maintain adequate ventilation when using cutting torches.
- 7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
- 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- 9. Dispose of demolished items and materials promptly.
- 10. Interior doors only, must be propped open using proper door wedges at the floor level. Materials must not be wedged along the door frame, and deadbolts must not be thrown to keep a door from closing. Deadbolts failing due to misuse will be repaired at the Contractors cost, upwards of \$400 per deadbolt. Exterior doors must remain unpropped always.
- 11. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- 12. The Contractor is responsible for any and all damage, caused by a lack of protection and/or procedures related to all items in these specifications, including, but not limited to: any interior or exterior equipment, adjacent surfaces, doors, door frames, furniture, finishes, and to the building, grounds and its systems, life safety, and other equipment. The Contractor must replace, repair and/or clean, at no additional cost to the University, any damaged property to its original state.

## 3.4 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.
- B. Only remove floor coverings as indicated in the Drawings for the General Contractors Scope of Work. Some flooring materials/areas are specifically called out for removal by HAZMAT Contractor ONLY and are not the responsibility of the General Contractor.

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## 3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
  - 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

#### 3.6 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

**END OF SECTION 024119** 

SELECTIVE DEMOLITION SECTION 024119 - 5

#### SECTION 079513.13 - INTERIOR EXPANSION JOINT COVER ASSEMBLIES

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. Section includes interior expansion joint cover assemblies.

### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for expansion joint cover assemblies.
- B. Shop Drawings: For each expansion joint cover assembly.
  - 1. Include plans, elevations, sections, details, splices, block-out requirement, attachments to other work, and line diagrams showing entire route of each expansion joint.
  - 2. Where expansion joint cover assemblies change planes, provide isometric or clearly detailed drawing depicting how components interconnect.
- C. Samples for Verification: For each type of expansion joint cover assembly, full width by 6 inches long in size.

#### 1.4 QUALITY ASSURANCE

- A. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for materials and execution.
  - 1. Build mockup of typical expansion joint cover assembly as shown on Drawings.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## **PART 2 - PRODUCTS**

#### 2.1 ASSEMBLY DESCRIPTION

- A. Furnish units in longest practicable lengths to minimize field splicing.
- B. Include factory-fabricated closure materials and transition pieces, T-joints, corners, curbs, cross-connections, and other accessories as required to provide continuous expansion joint cover assemblies.

## 2.2 FLOOR EXPANSION JOINT COVERS

- A. Metal-Plate Floor Joint Cover: Metal cover plate fixed on one side of joint gap and free to slide on other.
  - 1. Schluter; Dilex BWA (Basis of Design)
  - 2. Application: Floor to floor.
  - 3. Installation: Surface mounted.
  - 4. Cover-Plate Design: Plain.
  - 5. Exposed Metal:
    - a. Aluminum: Manufacturer's standard.
      - 1) Color: As selected by Architect from full range of industry colors and color densities.
    - b. Stainless steel: Manufacturer's standard.

## 2.3 MATERIALS

- A. Aluminum: ASTM B 221, Alloy 6063-T5 for extrusions; ASTM B 209, Alloy 6061-T6 for sheet and plate.
  - 1. Apply manufacturer's standard protective coating on aluminum surfaces to be placed in contact with cementitious materials.

## 2.4 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, or thicker.
- B. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.

## 2.5 ACCESSORIES

A. Manufacturer's standard attachment devices. Include anchors, clips, fasteners, set screws, spacers, and other accessories compatible with material in contact, as indicated or required for complete installations.

#### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Examine surfaces where expansion joint cover assemblies will be installed for installation tolerances and other conditions affecting performance of the Work.
- B. Notify Architect where discrepancies occur that will affect proper expansion joint cover assembly installation and performance.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Prepare substrates according to expansion joint cover assembly manufacturer's written instructions.
- B. Coordinate and furnish anchorages, setting drawings, and instructions for installing expansion joint cover assemblies. Provide fasteners of metal, type, and size to suit type of construction indicated and to provide for secure attachment of expansion joint cover assemblies.

## 3.3 INSTALLATION

- A. Comply with manufacturer's written instructions for storing, handling, and installing expansion joint cover assemblies and materials unless more stringent requirements are indicated.
- B. Metal Frames: Perform cutting, drilling, and fitting required to install expansion joint cover assemblies.
  - 1. Repair or grout block out as required for continuous frame support using nonmetallic, shrinkage-resistant grout.
  - 2. Install frames in continuous contact with adjacent surfaces.
    - a. Shimming is not permitted.
  - 3. Install in true alignment and proper relationship to joints and adjoining finished surfaces measured from established lines and levels.
  - 4. Adjust for differences between actual structural gap and nominal design gap due to ambient temperature at time of installation.

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- 5. Cut and fit ends to accommodate thermal expansion and contraction of metal without buckling of frames.
- 6. Locate anchors at interval recommended by manufacturer, but not less than 3 inches from each end and not more than 24 inches o.c.
- C. Install with hairline mitered corners where expansion joint cover assemblies change direction or abut other materials.
- D. Terminate exposed ends of expansion joint cover assemblies with field- or factory-fabricated termination devices.

## 3.4 PROTECTION

- A. Do not remove protective covering until finish work in adjacent areas is complete. When protective covering is removed, clean exposed metal surfaces to comply with manufacturer's written instructions.
- B. Protect the installation from damage by work of other Sections. Where necessary due to heavy construction traffic, remove and properly store cover plates or seals and install temporary protection over expansion joint cover assemblies. Reinstall cover plates or seals prior to Substantial Completion.

END OF SECTION 079513.13

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## **SECTION 093013 - CERAMIC TILING**

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Porcelain tile.
  - 2. Thresholds.
  - 3. Waterproof membrane for thinset applications.
  - 4. Crack isolation membrane.
  - 5. Metal edge strips.

## 1.3 DEFINITIONS

- A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.
- B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in its "Specifications for Installation of Ceramic Tile."
- C. Face Size: Actual tile size, excluding spacer lugs.
- D. Module Size: Actual tile size plus joint width indicated.

# 1.4 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
  - 1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.

## 1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

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- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.
- C. Samples for Verification:
  - 1. Full-size units of each type and composition of tile and for each color and finish required.
  - 2. Thresholds in 6-inch lengths.
  - 3. Metal edge strips in 6-inch lengths.

## 1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

#### 1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.
  - 2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

## 1.8 QUALITY ASSURANCE

- A. Installer Qualifications:
  - 1. Installer is a Five-Star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile Contractors' Association of America.
  - 2. Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification.
  - 3. Installer employs only Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers for Project.
  - 4. Installer employs at least one installer for Project that has completed the Advanced Certification for Tile Installers (ACT) certification for installation of mud floors membranes.
- B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Build mockup of each type of floor tile installation.
  - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

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## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.
- B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- D. Store liquid materials in unopened containers and protected from freezing.

## 1.10 FIELD CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

#### **PART 2 - PRODUCTS**

## 2.1 MANUFACTURERS

- A. Source Limitations for Tile: Obtain tile of each type and color or finish from single source or producer.
  - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
  - 2. Manufactures: Subject to compliance with requirements, provide products by one of the following:
    - (1) Milestone (Formerly Florim USA). (Galaxy; Basis of Design)
    - (2) Interceramic.
    - (3) Roca.
- B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from single manufacturer and each aggregate from single source or producer.
  - 1. Obtain setting and grouting materials, except for unmodified Portland cement and aggregate, from single manufacturer.
  - 2. Obtain waterproof membrane and crack isolation membrane, except for sheet products, from manufacturer of setting and grouting materials.
  - 3. Manufactures: Subject to compliance with requirements, provide products by one of the following:

(1) Laticrete. (Basis of Design)

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- (2) Ardex.
- (3) Custom.
- C. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer:
  - a. Thresholds.
  - b. Waterproof membrane.
  - c. Crack isolation membrane.
  - d. Metal edge strips.
  - 1. Manufactures: Subject to compliance with requirements, provide products by one of the following:
    - (1) Schluter. (Basis of Design)
    - (2) Blanche.
    - (3) Profilitec.

## 1.2 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
  - 1. Provide tile complying with Standard grade requirements.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.
- C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
- D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.

## 1.3 TILE PRODUCTS

- A. Ceramic Tile Type PT-2: Unglazed Porcelain Tile ("Matte Finish").
  - 1. Milestone; Galaxy 1095565; Color Body Porcelain (Basis of Design)
  - 2. Certification: Tile certified by the Porcelain Tile Certification Agency.
  - 3. Face Size: 12 by 24 inches.
  - 4. Face Size Variation: Rectified.
  - 5. Thickness: 3/8 inch.
  - 6. Face: As indicated.
  - 7. Dynamic Coefficient of Friction: Not less than 0.42.
  - 8. Tile Color, Glaze, and Pattern: As indicated on Finish Material Legend.

- 9. Grout Color: As indicated on Finish Material Legend.
- B. Ceramic Tile Type PT-3: Unglazed Porcelain Tile ("Matte Finish").
  - 1. Milestone; Galaxy 1095561; Color Body Porcelain (Basis of Design)
  - 2. Certification: Tile certified by the Porcelain Tile Certification Agency.
  - 3. Face Size: 6 by 24 inches.
  - 4. Face Size Variation: Rectified.
  - 5. Thickness: 3/8 inch.
  - 6. Face: As indicated.
  - 7. Dynamic Coefficient of Friction: Not less than 0.42.
  - 8. Tile Color, Glaze, and Pattern: As indicated on Finish Material Legend.
  - 9. Grout Color: As indicated on Finish Material Legend.
- C. Ceramic Tile Type PTB-2: Unglazed Porcelain Tile ("Matte Finish").
  - 1. Milestone; Galaxy 1095565 (6"x24"); Color Body Porcelain (Basis of Design)
  - 2. Certification: Tile certified by the Porcelain Tile Certification Agency.
  - 3. Face Size: 8 x 32 inches cut in half (8 x 16 inches)
  - 4. Face Size Variation: Rectified.
  - 5. Thickness: 3/8 inch.
  - 6. Face: As indicated.
  - 7. Dynamic Coefficient of Friction: Not less than 0.42.
  - 8. Tile Color, Glaze, and Pattern: As indicated on Finish Material Legend.
  - 9. Grout Color: As indicated on Finish Material Legend.
  - 10. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide finish trim as follows, selected from manufacturer's standard shapes:
    - a. Base Cap: Schluter-SCHIENE (Basis of Design); finish as selected by Manufacture's Full Range.

## 1.4 THRESHOLDS

A. General: Provide ADA Compliant profiles indicated or required to provide transition between adjacent floor finishes.

#### B. Thresholds:

1. Description: Provide Schluter- RENO-TK, Satin Nickel, at transitions between CPT and PT on Frist Floor. Match Architect's sample; coordinate with Owner for final approval.

## 1.5 CRACK ISOLATION MEMBRANE

A. General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.12 for standard performance and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

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- B. Polyethylene Sheet: Polyethylene faced on both sides with fleece webbing; 0.008-inch nominal thickness.
  - Provide Schluter- DITRA; polyethylene membrane with a grid structure of square cavities (Basis of Design)

## 1.6 GROUT MATERIALS

- A. Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored aggregate as required to produce color indicated.
- B. Water-Cleanable Epoxy Grout: ANSI A118.3.
  - 1. Laticrete; Epoxy (Basis of Design)
  - 2. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F, respectively, and certified by manufacturer for intended use.
- C. Grout for Pre-grouted Tile Sheets: Same product used in factory to pre-grout tile sheets.

#### 1.7 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- B. Metal Edge Strips: Angle or L-shaped, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring applications; stainless steel, ASTM A276/A276M or ASTM A666, 300 Series exposededge material.
  - 1. Schluter, RENO-TK (Satin Nickel Anodized Aluminum); Basis of Design
  - 2. Schluter-SCHIENE (Satin Nickel Anodized Aluminum); Basis of Design

## 1.8 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

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## **PART 2 - EXECUTION**

#### 2.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
  - 1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
  - 2. Verify that concrete substrates for tile floors installed with adhesives or thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.
    - a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
    - b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.
  - 3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
  - 4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 2.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.
- B. Where indicated, prepare substrates to receive waterproof membrane by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

### 2.3 INSTALLATION OF CERAMIC TILE

A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA

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installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

- 1. For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:
  - a. Tile floors consisting of tiles 8 by 8 inches or larger.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.
- F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
  - 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
  - 2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
  - 3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.
- G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
  - 1. Porcelain Tile: 1/4 inch.
- H. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.
- I. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
  - 1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
- J. Stone Thresholds: Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated.

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- 1. Do not extend waterproof membrane or crack isolation membrane under thresholds set in standard dry-set modified dry-set or improved modified dry-set mortar. Fill joints between such thresholds and adjoining tile set on waterproof membrane or crack isolation membrane with elastomeric sealant.
- K. Metal Edge Strips: Install where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with or below top of tile and no threshold is indicated.
- L. Floor Sealer: Apply floor sealer to grout joints in tile floors according to floor-sealer manufacturer's written instructions. As soon as floor sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

#### 2.4 INSTALLATION OF WATERPROOF MEMBRANE

- A. Install waterproof membrane to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness that is bonded securely to substrate.
- B. Allow waterproof membrane to cure and verify by testing that it is watertight before installing tile or setting materials over it.

#### 2.5 INSTALLATION OF CRACK ISOLATION MEMBRANE

- A. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.
- B. Allow crack isolation membrane to cure before installing tile or setting materials over it.

## 2.6 ADJUSTING AND CLEANING

- A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.
- B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
  - 1. Remove grout residue from tile as soon as possible.
  - 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

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## 2.7 PROTECTION

- A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.
- B. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.
- C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

**END OF SECTION 093013** 

#### SECTION 096513 - RESILIENT BASE AND ACCESSORIES

#### PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Thermoplastic-rubber base.
  - 2. Rubber stair accessories.

## 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified, not less than 12 inches long.
- C. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches long.

## 1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed.

# 1.5 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
  - 1. Coordinate mockups in this Section with mockups specified in other Sections.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

#### 1.7 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive resilient products during the following periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Install resilient products after other finishing operations, including painting, have been completed.

#### PART 2 - PRODUCTS

## 2.1 THERMOPLASTIC-RUBBER BASE – RB-1, RB-2

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Roppe (Basis of Design)
  - 2. Johnsonite
  - 3. Mannington
- B. Product Standard: ASTM F 1861, Type TP (rubber, thermoplastic).
  - 1. Group: I solid, homogeneous.
  - 2. Style and Location:
    - a. Style Cove: (Renovation Style) As indicated per Drawings.
- C. Thickness: 1/8 inch.
- D. Height: As indicated on Drawings.

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- E. Lengths: Coils in manufacturer's standard length.
- F. Outside Corners: Job formed.
- G. Inside Corners: Job formed.
- H. Colors: As indicated on Drawings.

## 2.2 RUBBER STAIR ACCESSORIES – ST-1, RF-1

- A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Roppe (Basis of Design)
  - 2. Johnsonite
  - 3. Mannington
- C. Stair Treads: ASTM F 2169.
  - 1. Type: TP (rubber, thermoplastic).
  - 2. Class: 2 (pattern; embossed, grooved, or ribbed).
  - 3. Group: 2 (with contrasting color for the visually impaired).
  - 4. Nosing Style: Square, adjustable to cover angles between 60 and 90 degrees.
  - 5. Nosing Height: As required per Project.
  - 6. Thickness: As indicated on Drawings, standard per manufacture.
  - 7. Size: Lengths and depths to fit each stair tread in one piece.
- D. Landing Tile (RF-1): Matching treads; produced by same manufacturer as treads and recommended by manufacturer for installation with treads. See Drawings for more information.
- E. Colors and Patterns: As indicated on Drawings.

#### 2.3 INSTALLATION MATERIALS

- A. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.
- B. Stair-Tread Nose Filler: Two-part epoxy compound recommended by resilient stair-tread manufacturer to fill nosing substrates that do not conform to tread contours.

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## **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Installation of resilient products indicates acceptance of surfaces and conditions.

## 3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates for Resilient Stair Accessories: Prepare horizontal surfaces according to ASTM F 710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
  - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
  - 4. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft. 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
- C. Do not install resilient products until materials are the same temperature as space where they are to be installed.
  - 1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
- D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

### 3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Preformed Corners: Install preformed corners before installing straight pieces.
- H. Job-Formed Corners:
  - 1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than inches in length.
    - a. Form without producing discoloration (whitening) at bends.
  - 2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 8 inches in length.
    - a. Miter or cope corners to minimize open joints.

# 3.4 RESILIENT ACCESSORY INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Resilient Stair Accessories:
  - Use stair-tread-nose filler to fill nosing substrates that do not conform to tread contours.
  - 2. Tightly adhere to substrates throughout length of each piece.
  - 3. For treads installed as separate, equal-length units, install to produce a flush joint between units.
- C. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

### 3.5 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

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- B. Perform the following operations immediately after completing resilient-product installation:
  - 1. Remove adhesive and other blemishes from surfaces.
  - 2. Sweep and vacuum horizontal surfaces thoroughly.
  - 3. Damp-mop horizontal surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

**END OF SECTION 096513** 

#### SECTION 096519 - RESILIENT TILE FLOORING

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Luxury vinyl floor tile.

### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: Full-size units of each color, texture, and pattern of floor tile required.
- C. Samples for Verification: Full-size units of each color and pattern of floor tile required.

## 1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

## 1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

## 1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Floor Tile: Furnish one box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

## 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.
  - 1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
  - 1. Coordinate mockups in this Section with mockups specified in other Sections.
    - a. Size: Minimum 100 sq. ft. for each type, color, and pattern in location directed by Owner.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.8 DELIVERY, STORAGE, AND HANDLING

A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

## 1.9 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

## **PART 2 - PRODUCTS**

## 2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient floor tile, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sg. cm.

#### 2.2 LUXURY VINYL FLOOR TILE LVT-1

- A. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
  - 1. INTERFACE; INTERFACE Services. (Artistry Plank; Basis of Design)
  - 2. Tandus (Venue)
  - 3. Parterre (Vertu)
- B. Tile Standard: ASTM F 1700.
  - 1. Class: As indicated by product designations.
  - 2. Type: A, Smooth Surface.
- C. Thickness: 0.118 inch.
- D. Size: 4 by 36 inches.
- E. Colors and Patterns: As indicated by manufacturer's designations Match Architect's samples as indicated on Finish Material Legend.

## **PART 3 - EXECUTION**

## 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F 710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
  - 3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
  - 4. Moisture Testing: Perform tests so that each test area does not exceed 500 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
    - a. Anhydrous Calcium Chloride Test: ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    - b. Relative Humidity Test: Using in-situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until materials are the same temperature as space where they are to be installed.
  - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

## 3.3 FLOOR TILE INSTALLATION

A. Comply with manufacturer's written instructions for installing floor tile.

\*\*\*NOTE: Existing 1-2 layers of 12"x12" VCT are present and are to remain in ALL RESIDENT ROOMS, unless otherwise noted in the Drawings. Remove all existing wax/finish, replace any damaged or missing tiles and skim coat to receive new LVT-1 per manufacturers specifications. \*\*\*

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

- 1. Lay tiles in pattern indicated.
- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
  - 1. Lay tiles with grain running in one direction.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in installation areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- H. Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

### 3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
  - 1. Remove adhesive and other blemishes from surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Cover floor tile until Substantial Completion.

**END OF SECTION 096519** 

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## **SECTION 096813 - TILE CARPETING**

PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. Section Includes:
  - 1. Modular carpet tile.
- B. Related Requirements:
  - 1. Section 096513 "Resilient Base and Accessories" Section 096519 "Resilient Tile Flooring" for resilient wall base and accessories installed with carpet tile.

## 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
  - 2. Include manufacturer's written installation recommendations for each type of substrate.
- B. Shop Drawings: For carpet tile installation, plans showing the following:
  - 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
  - 2. Carpet tile type, color, and dye lot.
  - 3. Type of subfloor.
  - 4. Type of installation.
  - 5. Pattern of installation.
  - 6. Pattern type, location, and direction.

7. Pile direction.

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- 8. Type, color, and location of insets and borders.
- 9. Type, color, and location of edge, transition, and other accessory strips.
- 10. Transition details to other flooring materials.
- C. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
  - 1. Carpet Tile: Full-size Sample.
  - 2. Exposed Edge, Transition, and Other Accessory Stripping: 12-inch- long Samples.
- D. Samples for Verification: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
  - 1. Carpet Tile: Full-size Sample.
  - 2. Exposed Edge, Transition, and Other Accessory Stripping: 12-inch-long Samples.

## 1.4 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For special warranty.

## 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For carpet tiles to include in maintenance manuals. Include the following:
  - 1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
  - 2. Precautions for cleaning materials and methods that could be detrimental to carpet tile.

## 1.6 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.
  - 1. Build mockups at locations and in sizes shown on Drawings.
  - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

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# 1.7 DELIVERY, STORAGE, AND HANDLING

A. Comply with the Carpet and Rug Institute's CRI 104.

#### 1.8 FIELD CONDITIONS

- A. Comply with the Carpet and Rug Institute's CRI 104 for temperature, humidity, and ventilation limitations.
- B. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weathertight, wet-work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at levels planned for building occupants during the remainder of the construction period.
- C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.
- D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

### 1.9 WARRANTY

- A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.
  - 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
  - 2. Failures include, but are not limited to, the following:
    - a. More than 10 percent edge raveling, snags, and runs.
    - b. Dimensional instability.
    - c. Excess static discharge.
    - d. Loss of tuft-bind strength.
    - e. Loss of face fiber.
    - f. Delamination.
  - 3. Warranty Period: No less than 5 years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

## 2.1 CARPET TILE, CPT-1

- A. Milliken (Basis of Design)
- B. Color: As selected by Architect from manufacturer's full range
- C. Pattern: ARX, TERGO 11C-CLOSED
- D. Fiber Content: Nylon 6, 6 Monofilaments, Aquafil
- E. Fiber Type: Type 6 Nylon
- F. Pile Characteristic: Tufted, cut pile.
- G. Pile Thickness: 0.433 in (11 mm) inches for finished carpet tile according to ASTM D6859.
- H. Total Weight: 1.397 lb./sq. ft. for finished carpet tile.
- I. Size: 7.87" x 7.87"/ 500cm x 500 cm
- J. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

# 2.2 CARPET TILE, CPT-1A

- A. Milliken (Basis of Design)
- B. Color: As selected by Architect from manufacturer's full range
- C. Pattern: ARX, PRIOR 16- OPEN CELL
- D. Fiber Content: Nylon 6, 6, Aquafil
- E. Fiber Type: Type 6 Nylon
- F. Pile Characteristic: Tufted, cut pile.
- G. Pile Thickness: .630 in (16 mm) for finished carpet tile according to ASTM D6859.
- H. Total Weight: 1.456 lb/sq. ft.for finished carpet tile.

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- I. Size: 7.87" x 7.87"/ 500cm x 500 cm
- J. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

## 2.3 CARPET TILE, CPT-1B

- A. Milliken (Basis of Design)
- B. Color: As selected by Architect from manufacturer's full range.
- C. Pattern: ARX, FORMA 2.0 16- OPEN CELL
- D. Fiber Content: Nylon 6, 6, Aquafil.
- E. Fiber Type: Type 6 Nylon
- F. Pile Characteristic: Tufted, cut pile.
- G. Pile Thickness: 0.630 in for finished carpet tile according to ASTM D6859.
- H. Total Weight: 1.866 lb/sq. ft. for finished carpet tile.
- I. Size: 7.87" x 7.87"/ 500cm x 500 cm
- J. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

## 2.4 CARPET TILE, CPT-2

- A. Interface (Basis of Design)
- B. Color: 104940 Iron
- C. Pattern: Step Repeat, SR899

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D. Fiber Content: 100 percent Recycled Content, Aquafil

E. Fiber Type: Type 6 Nylon

F. Pile Characteristic: Tufted Textured Loop

G. Pile Density: 6,545 oz/yard.

H. Pile Thickness: 0.143 in.

I. Stitches: 10/ in.

J. Total Weight: 26 oz./sq. yd. for finished carpet tile.

K. Backing System: GlasBac

L. Size: 19.69in x 19.69in./ 50cm x 50cm

## M. Applied Treatments:

- 1. Soil-Resistance Treatment: Manufacturer's standard treatment
- 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
  - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

## N. Performance Characteristics:

1. Appearance Retention Rating: Severe traffic, 3.5 minimum according to ASTM D7330.

## 2.5 CARPET TILE, CPT-3

- A. Shaw (Basis of Design)
- B. Color: As selected by Architect from manufacturer's full range.
- C. Pattern: Haven, Honest Tile.
- D. Fiber Content: Eco Solution Q Nylon
- E. Fiber Type: 100% Solution Dyed Nylon
- F. Pile Characteristic: Multi-Level Pattern Loop.
- G. Pile Density: 10,500 oz/yard.
- H. Pile Thickness: 0.096 in.

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- I. Stitches: 8/ inch.
- J. Total Weight: 28 oz./sq. yd. for finished carpet tile.
- K. Primary Backing/Backcoating: Synthetic
- L. Backing System: Ecoworx tile
- M. Size: 9in x 36in./ 22.9cm x 91.4cm
- N. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.
- O. Performance Characteristics:
  - 1. Electrostatic Propensity: Less than 3.5 kV according to AATCC 134.
- 2.6 CARPET TILE, CPT-4
  - A. J + J Flooring Group (Basis of Design)
  - B. Color: 2466 Turn Heads
  - C. Pattern: One Good Turn, One Good Turn Modular 7075
  - D. Fiber Content: 100 percent nylon, Encore SD Ultimata
  - E. Fiber Type: Solution Dyed Nylon
  - F. Pile Characteristic: Pattern Textured Loop
  - G. Pile Density: 6,670 oz/yard.
  - H. Total Thickness: .250 inches
  - I. Stitches: 9.27/ in.
  - J. Surface Pile Weight: 24 oz./sq. yd.>.
  - K. Total Weight: 24 oz./sq. yd.
  - L. Backing System: Nexus Modular
  - M. Size: 24in x 24in./ 60.96cm x 60.96cm

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## N. Applied Treatments:

- 1. Soil-Resistance Treatment: Manufacturer's standard treatment
- 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
  - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

### O. Performance Characteristics:

 Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.

## 2.7 CARPET TILE, CPT-6A

- A. Interface (Basis of Design)
- B. Color: 105916 Iron Plain.
- C. Pattern: Visual Code, Plain Stitch
- D. Fiber Content: 100 percent Recycled Content, Aquafil
- E. Fiber Type: Type 6 Nylon
- F. Pile Characteristic: Tufted Pattern Loop pile.
- G. Density: 7,846 oz./cu. yd.
- H. Pile Thickness: 0.078 in for finished carpet tile according to ASTM D6859.
- I. Stitches: 11 per inch.
- J. Total Weight: 17 oz./sq. yd. for finished carpet tile.
- K. Backing System: GlasBac.
- L. Size: 9.845 x 39.38 inches.
- M. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.
- N. Performance Characteristics:

1. Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.

#### 2.8 CARPET TILE, CPT-6B

- A. Interface (Basis of Design)
- B. Color: 105924 Iron Count
- C. Pattern: Visual Code, Stitch Count
- D. Fiber Content: 100 percent recycled content, Aquafil
- E. Fiber Type: Type 6 Nylon
- F. Pile Characteristic: Tufted, sheared pile.
- G. Density: 5,554 oz./cu. yd.
- H. Pile Thickness: 0.175 inches for finished carpet tile according to ASTM D6859.
- I. Stitches: 12 per inch>.
- J. Total Weight: 27 oz./sq. yd.> for finished carpet tile.
- K. Backing System: GlasBac.
- L. Size: 9.845 x 39.38 inches.
- M. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.
- N. Performance Characteristics:
  - Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.

#### 2.9 CARPET TILE, CPT-6C

- A. Interface (Basis of Design)
- B. Color: 105932 Iron Stitchery

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- C. Pattern: Visual Code, Stitchery
- D. Fiber Content: 100 percent Recycled Content, Aquafil.
- E. Fiber Type: Type 6 Nylon.
- F. Pile Characteristic: Tufted Pattern Loop pile.
- G. Density: 7,650 oz./cu. yd.>.
- H. Pile Thickness: 0.08 inches for finished carpet tile according to ASTM D6859.
- I. Stitches: 10.5 per inch.
- J. Total Weight: 17 oz./sq. yd. for finished carpet tile.
- K. Backing System: GlasBac.
- L. Size: 9.845 x 39.38 inches.
- M. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.
- N. Performance Characteristics:
  - 1. Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.
- 2.10 CARPET TILE, CPT-7A, CPT-7B
  - A. Interface (Basis of Design)
  - B. Color: As Indicated on Drawings.
  - C. Pattern: Driftwood, 138940AK00
  - D. Fiber Content: 100 percent Recycled Content, Aquafil.
  - E. Fiber Type: Type 6 Nylon.
  - F. Pile Characteristic: Tufted Textured Loop pile.
  - G. Density: 6,821 oz./cu. yd.>.

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- H. Pile Thickness: 0.095 inches for finished carpet tile according to ASTM D6859.
- I. Stitches: 8.7 per inch.
- J. Total Weight: 18 oz./sq. yd. for finished carpet tile.
- K. Backing System: GlasBac.
- L. Size: 9.845 x 39.38 inches.
- M. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.
- N. Performance Characteristics:
  - 1. Appearance Retention Rating: Severe traffic, 3.5 minimum according to ASTM D7330.

#### 2.11 CARPET TILE, CPT-8

- A. Tandus Centiva (Basis of Design)
- B. Color: Ibiza Tweed 27311
- C. Pattern: Open Archive Collection, Marbled Tweed 11072
- D. Fiber Content: TDX Nylon.
- E. Fiber Type: Nylon Type 6 or 6,6.
- F. Pile Characteristic: Stratatec Patterned pile.
- G. Pile Thickness: 0.187 inches.
- H. Stitches: 8 per inch.
- I. Face Weight: 22 oz./sq. yd.
- J. Primary Backing/Backcoating: Polyester, non-woven synthetic fiber.
- K. Backing System: Manufacturer's Proprietary System.
- L. Size: 18 by 36 inches.

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#### M. Applied Treatments:

- 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
- 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
  - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

#### N. Performance Characteristics:

- Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.
- 2. Tuft Bind: Not less than 8 lbf according to ASTM D1335.
- 3. Dimensional Stability: 0.149 percent or less according to ISO 2551 (Aachen Test).
- 4. Colorfastness to Light: Not less than 4 after 100 AFU (AATCC fading units) according to AATCC 16, Option E.
- 5. Electrostatic Propensity: Less than 3.0 kV according to AATCC 134.

#### 2.12 CARPET TILE, CPT-10

- A. Forbo (Basis of Design)
- B. Color: 145001 Vesuvius
- C. Pattern: Flotex Modular, Lava
- D. Fiber Content: Flotex Flocked Textile
- E. Fiber Type: Nylon 6,6
- F. Pile Characteristic: cut (flocked) pile.
- G. Pile Thickness: 0.2 inches
- H. Primary Backing/Backcoating: Recycled Vinyl Cushioned Backing
- I. Backing System: Manufacturer's Proprietary System.
- J. Size: 9.84 by 39.37 inches.
- K. Applied Treatments:
  - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
  - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
    - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.

- L. Performance Characteristics:
  - Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.
- 2.13 CARPET TILE, CPT-11
  - A. Milliken (Basis of Design)
  - B. Color: RAM153-133 Shield
  - C. Pattern: Sepio, Rampart
  - D. Fiber Content: 50 percent Econyl solution-dyed nylon Type 6, 50 percent Econyl solution-dyed Monofilament
  - E. Fiber Type: Nylon Type 6
  - F. Pile Characteristic: Tufted, Multi-Level Loop pile.
  - G. Density: 5,801 oz./cu. yd.
  - H. Pile Thickness: 0.175 inches for finished carpet tile according to ASTM D6859.
  - I. Stitches: 11.3 per inch.
  - J. Total Weight: 28.2 oz./sq. yd. for finished carpet tile.
  - K. Backing System: PVC-Free Underscore ES Cushion; Manufacturer's Proprietary System.
  - L. Size: 19.7 x 19.7 inches. (50 cm x 50cm)
  - M. Applied Treatments:
    - 1. Soil-Resistance Treatment: Manufacturer's standard treatment.
    - 2. Antimicrobial Treatment: Manufacturer's standard treatment that protects carpet tiles as follows:
      - a. Antimicrobial Activity: Not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174.
  - N. Performance Characteristics:
    - 1. Appearance Retention Rating: Heavy traffic, 3.0 minimum according to ASTM D7330.

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#### 2.14 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.
- B. Adhesives: Water-resistant, mildew-resistant, non-staining, pressure-sensitive type to suit products and subfloor conditions indicated, that comply with flammability requirements for installed carpet tile, and are recommended by carpet tile manufacturer for releasable installation.
- C. Metal Edge/Transition Strips: Extruded aluminum with finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance.
- B. Examine carpet tile for type, color, pattern, and potential defects.
- C. Concrete Slabs: Verify that finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" and that surfaces are free of cracks, ridges, depressions, scale, and foreign deposits.
  - 1. Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
    - a. Anhydrous Calcium Chloride Test: ASTM F1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    - b. Relative Humidity Test: Using in situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.
    - c. Perform additional moisture tests recommended in writing by adhesive and carpet tile manufacturers. Proceed with installation only after substrates pass testing.

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D. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. General: Comply with the Carpet and Rug Institute's CRI 104 and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch unless more stringent requirements are required by manufacturer's written instructions.
- C. Concrete Substrates: Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by adhesive and carpet tile manufacturers.
- D. Metal Substrates: Clean grease, oil, soil and rust, and prime if recommended in writing by adhesive manufacturer. Rough sand painted metal surfaces and remove loose paint. Sand aluminum surfaces, to remove metal oxides, immediately before applying adhesive.
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

#### 3.3 INSTALLATION

- A. General: Comply with the Carpet and Rug Institute's CRI 104, Section 10, "Carpet Tile," and with carpet tile manufacturer's written installation instructions.
- B. Installation Method: As recommended in writing by carpet tile manufacturer.
- C. Maintain dye-lot integrity. Do not mix dye lots in same area.
- D. Maintain pile-direction patterns indicated on Drawings.

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- E. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
- F. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on carpet tile as marked on subfloor. Use non-permanent, non-staining marking device.
- H. Install pattern parallel to walls and borders, as indicated in Drawings.

#### 3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet tile:
  - 1. Remove excess adhesive and other surface blemishes using cleaner recommended by carpet tile manufacturer.
  - 2. Remove yarns that protrude from carpet tile surface.
  - 3. Vacuum carpet tile using commercial machine with face-beater element.
- B. Protect installed carpet tile to comply with the Carpet and Rug Institute's CRI 104, Section 13.7.
- C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

**END OF SECTION 096813** 



# LIMITED ASBESTOS CONTAINING MATERIAL INVESTIGATION REPORT

USC – CAPSTONE FLOORING RENOVATIONS (HOUSING SECTION) 902 BARNWELL STREET COLUMBIA, SOUTH CAROLINA 29201

### PREPARED FOR:



Mr. James P. Sherry Senior Project Manager Facilities Design and Construction 1520 Devine Street Columbia, South Carolina 29208

### **PREPARED BY:**

F&ME Consultants 1825 Blanding Street Columbia, South Carolina 29201

**August 3, 2018** 

F&ME Project No.: E5700.330

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### 1. EXECUTIVE SUMMARY

This executive summary is intended as an overview for the convenience of the reader. This report should be reviewed in its entirety prior to making any decisions regarding this project.

F&ME Consultants Inc. (F&ME) has completed an Asbestos Containing Material (ACM) Investigation of the USC's Capstone Residence Hall building located on USC Columbia's main campus. The investigation was requested as a component of a planned renovation associated with the removal and replacement of the existing flooring finishes throughout the housing portions of the building. Therefore, this investigation addresses the interior flooring materials in these areas of the building only that will be impacted by the planned flooring replacement project. The investigation was conducted in accordance with South Carolina Department of Health and Environmental Control (SCDHEC), United States Environmental Protection Agency (USEPA), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Occupational Safety and Health Administration (OSHA) regulations requiring an ACM investigation prior to any demolition and/or renovation activities.

Per an agreed upon scope of work, F&ME performed this Investigation to identify ACM that may be encountered during the planned renovations, and to make recommendations regarding proper handling and disposal of any ACM found. The scope of work included a complete investigation of the interior floor finishes associated with the housing portion of the building. The field investigation was performed on July 25th, 2018.

The ACM investigation uncovered multiple suspect materials that will be impacted by the planned renovations. Of the suspect materials sampled and analyzed, laboratory results indicate that the following materials were found to be positive for asbestos content: **residual black mastic under various non-ACM floor tiles and carpeting; off-white floor tiles and associated mastic; and green/white linoleum.** 

We sincerely appreciate the opportunity to assist you with this project. Should you have any questions or require additional information concerning this Investigation, please do not hesitate to contact our office at (803) 254-4540.

Sincerely,

**F&ME CONSULTANTS** 

Michael S. Mincey

**Environmental Professional** 

Asbestos Consultant/ Management Planner

SCDHEC License No: MP-00161

Expiration Date 01/29/2019

Glynn M. Ellen

**Environmental Department Manager** 

Asbestos Consultant/ Management Planner

SCDHEC License No: MP-20979

Expiration Date 1/29/2019

# 2. INTRODUCTION

It is our understanding that a renovation is planned to remove and replace the existing flooring materials throughout the housing portions of the building only from the basement level up to the 17<sup>th</sup> floor. Therefore, the scope of this ACM Investigation was to identify, assess and sample flooring materials suspected of containing asbestos within the interior housing areas that will be impacted by the planned flooring replacement project. In addition, analytical sampling data provided by USC Hazmat has indicated that the joint compound associated with the drywall wall systems throughout the building has been proven to contain asbestos. Thus, the baseboard adhesive was the only wall component to be tested in non-drywall areas as part of this investigation as it will be impacted by the flooring renovation. The field investigation was performed on July 25th, 2018.

The results, conclusions and recommendations from this investigation are representative of the conditions observed at the site on the dates of the field inspection. F&ME does not assume responsibility for any changes in conditions or circumstances that occur after the inspection. This report has been prepared exclusively for USC and shall not be disseminated in whole or part to other parties without prior consent from USC or F&ME Consultants, Inc. No other environmental issues were addressed as part of this report.

### 3. EXISTING BUILDING STRUCTURE

The Capstone Residence Hall, constructed in the late 1960's, is a concrete and steel approximate 183,000 square foot, 18 story structure located at 902 Barnwell Street in Columbia, SC on the USC's main campus. (See Appendix A – Site Vicinity Map, for the location of the structure. See Appendix B – General Building Plans, for a layout of the building.) The building was constructed with masonry block, concrete, steel structural columns and beams with an exterior precast concrete panel.

Photo 1. University of South Carolina - Capstone Residence Hall

Interior finishes within the building consisted building located at 902 Barnwell, Columbia SC. suspended ceiling system.

of drywall and masonry block walls, various floor finishes over a concrete floor slabs, and a

### 4. FIELD ASSESSMENT

The purpose of this Investigation was to locate, sample and record the physical characteristics of suspect ACM flooring materials to be impacted by the planned flooring replacement project throughout the housing area of the subject building. During the field assessment, interior flooring finishes were visually inspected and delineated. Once reviewed, the quantities and physical condition of suspect flooring materials were assessed, and bulk samples of these materials were submitted for laboratory analysis.

## 4.1 Suspect Materials

The purpose of this investigation was to locate, sample and record the physical characteristics of suspect ACM within the renovation areas of the subject structure. Therefore, the quantities and physical condition of suspect flooring materials were assessed, and bulk samples of these materials were submitted for laboratory analysis. The following suspect materials and approximate amounts were identified during this ACM Investigation:

- 12" x 12" Off-White w/Brown/Teal Floor Tile & Mastic (>5,000 SF)
- 12" x 12" Brown Floor Tile & Mastic (>5,000 SF)
- Carpet Adhesive (>5,000 SF)
- Baseboard Adhesive (<5,000 SF)
- Rubber Stairwell Tread Adhesive (<5,000 SF)
- 12" x 12" Blue w/White Floor Tile & Mastic (~280 SF)
- Green/White Linoleum Flooring & Mastic (~120 SF)
- 12" x 12" Black Floor Tile & Mastic (~320 SF)
- 18" x 18" Brown/Tan Floor Tile & Mastic (~78 SF)
- 12" x 12" White Floor Tile & Mastic (~320 SF)
- 12" x 12" Off-White w/Tan Floor Tile & Mastic (>1,000 SF)
- 12" x 12" Tan Floor Tile & Mastic (>1,000 SF)
- 12" x 12" Green Floor Tile & Mastic (~100 SF)
- Quarry Tile Mortar Bed (~1,520 SF)
- Black Expansion Joint Caulk (~100 SF)
- Black Waterproofing Material (~10 SF)
- 12" x 12" Off-White Floor Tile & Mastic (~265 SF)
- 12" x 12" Brown Elevator Floor Tile & Mastic (~180 SF)

Random samples of the suspect materials were collected for laboratory analysis, and their physical characteristics were recorded. Building materials such as concrete, metal, wood,

brick, carpet, etc., were not considered suspect ACM. Bulk samples of suspect materials were analyzed by Polarized Light Microscopy (PLM) in accordance with EPA 600/R-93/116. Confirmation Transmission Electron Microscopy (TEM) was also performed on any non-friable organically bound materials that tested negative for asbestos content as per SCDHEC regulations effective May 27, 2011. See Appendix E – Summary of Samples, for complete list of all samples taken. See Appendix L–SCDHEC Regulation Summary. Proper sampling and chain-of-custody protocols were followed to ensure appropriate handling and delivery of samples to the analytical laboratory. Refer to Appendix K – Personnel Certifications, for SCDHEC qualifications of Investigation personnel, and Appendix J– Chain of Custody Forms, for documentation of proper handling and delivery of samples.

# 5. ASSESSMENT RESULTS

During the field investigation and sample collection, evidence of residual ACM mastic was found under carpet in the corridors of the typical repeating dormitory floors two (2) through sixteen (16). In addition, it was evident when obtaining samples of various floor tiles in the building that a residual mastic was present. Laboratory analysis of the multiple mastic samples clearly showed that more than one (1) mastic was present. No information was provided regarding the age of the existing floor tiles found in these areas, past renovation activities that have occurred, or past abatement activities. However, it appears that the positive results obtained of the mastic samples in the building are the result of a previous mastic that was left in the building during a past flooring renovation project.

It should be noted that due to the destructive nature of sample collection, sampling location tend to occur around the perimeter of a room in less conspicuous locations. However, a brown floor tile installed in a pattern was present in each of the dorm rooms and sampling this material required samples to be collected out in the middle of the floors. Some of the analytical results from the mastic under these tiles returned a negative result, with may be an indication of past abatement activities. Delineation of these areas would require extensive sampling and would likely result in confirming that a large amount of the residual mastic remains in the building.

A total of eighty-seven (87) samples were collected from the subject building. A "first positive stop" protocol was implemented for this sampling. This protocol establishes that if the first sample of a material tested positive for asbestos content, subsequent samples were not to be analyzed, and would be considered positive as well. Therefore, due to multiple layers of some materials sampled, and the implementation of a "first positive stop" protocol, eighty-two (82) samples were analyzed by PLM and thirty-four (34) were TEM-confirmed. Based on the sample results, twenty-six (26) samples returned positive results for asbestos. These ACM materials are: **residual black mastic** 

under various non-ACM floor tiles and carpeting; off-white floor tiles and associated mastic; and green/white linoleum. See Appendix C –Sample Location Plan, for the various sample locations and Appendix F –Summary of Asbestos Containing Materials, for the materials determined to be ACM.

Appropriate sampling and chain-of-custody protocols were followed to ensure proper handling and delivery of samples to the analytical laboratory. Appendix I – Bulk Asbestos Analytical Report and Appendix J – Laboratory Chain of Custody were provided to show laboratory documentation of the analytical results. Appendix K – Personnel Certification, provides the qualifications for the F&ME Asbestos Inspectors.

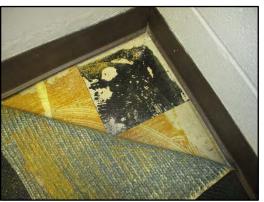
# 5.1 Homogeneous Area Locations Where ACM Was Identified

The following are photographs, descriptions, and approximate quantities of the ACM identified during the Investigation. Guidance is also provided for the proper handling and disposition if the materials in these areas are to be removed. See Appendix D – Homogeneous Area Plans, for homogeneous sampling areas for the various ACM identified below.

HA-1 – Residual Black Mastic under Non-ACM Floor Tiles and Carpeting (>5,000 SF). Residual black mastic under non-ACM floor tiles and carpeting throughout the building and in the three (3) residential elevator cars. The residual black mastic is in a good and non-friable condition. If this material will be impacted by the planned renovation activities and must be removed and disposed of as ACM by a licensed abatement contractor prior to the beginning of those renovation activities.

HA-2 –12" x 12" Off-White Floor Tiles and Associated Mastic (~575 SF). The 12" x 12" off-white floor tiles and associated mastic is located under 12" x 12" non-ACM black floor tiles in all 17<sup>th</sup> floor bathrooms and under carpet in room 003 in the basement. These materials appear to be intact and in a non-friable condition. If this material will be impacted by the planned renovation activities and must be removed and disposed of as ACM by a licensed abatement contractor prior to the beginning of those renovation activities.





# HA-3 – Green/White Linoleum Flooring (~120 SF).

This ACM material is located in room 1727. Overall, this material was found in a good, intact and non-friable condition. However, the removal of this material will render it friable and must be removed under full containment. If this material will be impacted by the planned renovation activities and must be removed and disposed of as ACM by a licensed abatement contractor prior to the beginning of those renovation activities.



#### 6. RECOMMENDATIONS

The results, conclusions, and recommendations of this Investigation are representative of the conditions observed at the site on the date of the field inspection. F&ME does not assume responsibility for any changes in conditions or circumstances that may have occurred after this inspection.

It is our understanding that a renovation is planned to remove and replace the existing flooring materials associated with the housing sections of the building from the basement to the 17<sup>th</sup> floor. Therefore, this investigation covers interior flooring finishes and baseboard adhesives that will be impacted by the planned flooring replacement project.

All ACM identified during this Investigation must be abated prior to the commencement of renovation activities, where ACM will, or may potentially, be impacted. In addition, additional suspect materials may be encountered during the renovations/or the demolition of the flooring systems. SCDHEC must be notified in the event any additional ACM is discovered, as well as changes in the condition of identified ACM. Lastly, several materials have shown to be <1% asbestos. While SCDHEC considers any material with <1% asbestos to be negative, OSHA however considers any asbestos found in a material to be positive and the worker must be protected from exposure.

Based on the analytical data, residual black mastic of >1% was found throughout the basement and residential halls two (2) through seventeen (17) of the building. The residual black mastic was found under various non-ACM floor tiles throughout the building and was also found under hallway carpeting on the typical repeating floors. Therefore, all flooring materials associated with residential floors two (2) through seventeen (17) are to be considered ACM and should be treated as such. Removal of these flooring materials should be done by a licensed abatement contractor with most being done as non-friable abatement means and methods.

It should be noted that multi-layered floor tiles and associated mastics located in the three (3) elevator cars and the green/white linoleum flooring in room 1727 will require them to be abated utilizing friable abatement means and methods and will need to be removed under full containment. In addition, the joint compound associated with the drywall wall systems has been tested and determined to be ACM during previous investigation of the building. Removal of the baseboard and associated adhesives and/or mastics will render the joint compound of the drywall wall systems friable and will require wet removal methods and engineering controls to contain the asbestos joint compound dust and debris that will be generated during its removal of baseboard where attached to drywall.

If any concealed and/or inaccessible ACM are encountered during abatement and/ or demolition activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner or the Owner's Environmental consultant for an appropriate response action. The SCDHEC must be notified in the event any additional ACM is discovered, as well as changes in the condition of identified ACM. Appendix M – Abatement Project Forms, are provided for more information. See Appendix G – Summary of Inspection and Appendix H –Physical Assessment Data Sheets, for description and condition of ACM materials.

All abatement work must be performed by an AHERA-certified and SCDHEC-licensed Abatement Contractor. This work must be performed in accordance with all applicable regulations and guidelines, such as notification and air monitoring requirements. All asbestos waste, including contaminated building materials (i.e. original window frames etc.), must be deposited in a landfill permitted by the SCDHEC for receiving ACM.

The SCDHEC's Standards of Performance for Asbestos Projects (R 61-86.1) includes requirements for abatement projects regarding notifications, project design, air sampling and analysis, etc. For informational purposes, some of these requirements are summarized below:

Notifications. Written notification (SCDHEC Form 3430) must be submitted to SCDHEC at least two (2) calendar weeks prior to initiation of abatement activities for renovation/demolition projects. A copy of this inspection report and applicable fee payment must be attached to the notification. Additional fees may be required. Copies of all notifications and documents pertinent to the abatement operations must be posted on the job site during abatement work. The Owner/Operators must notify all parties involved with this project of the nature of the work as well as the locations and quantities of asbestos materials to be disturbed or those located near demolition/removal work areas. This notification requirement is also extended to any persons/employees who work near the demolition/removal work areas.

*Project Design*. Furthermore, abatement projects that will remove more than 3,000 square feet, 1,500 linear feet, or 656 cubic feet of regulated asbestos-containing materials are required to have



a licensed and certified Abatement Project Designer develop a project design prior to the commencement of any abatement activities. The Abatement Contractor is required to adhere to the design, which must address all information as directed by the regulations.

*Air Monitoring*. The Abatement Contractor is responsible for daily personal air sampling for Abatement Workers in compliance with current OSHA standard 29 CFR 1926.1101. All remaining air monitoring services required for a renovation project (i.e. backgrounds, areas, and clearances) will be provided by the Owner or the Owner's Representative, as required by SCDHEC.

We sincerely appreciate the opportunity to be of service to USC, in this matter. If you have any questions regarding the information presented herein, please contact our office at (803) 254-4540.

# **APPENDICES**

Appendix A – Site Vicinity Map

Appendix B – General Building Plans

Appendix C – Sample Location Plans

Appendix D – Homogeneous Area Plans

Appendix E – Summary of Samples

Appendix F – Summary of Asbestos Containing Materials

Appendix G – Summary of Inspection

Appendix H – Physical Assessment Data Sheets

Appendix I – Laboratory Analysis Reports

Appendix J – Chain of Custody Forms

Appendix K – Personnel Certifications

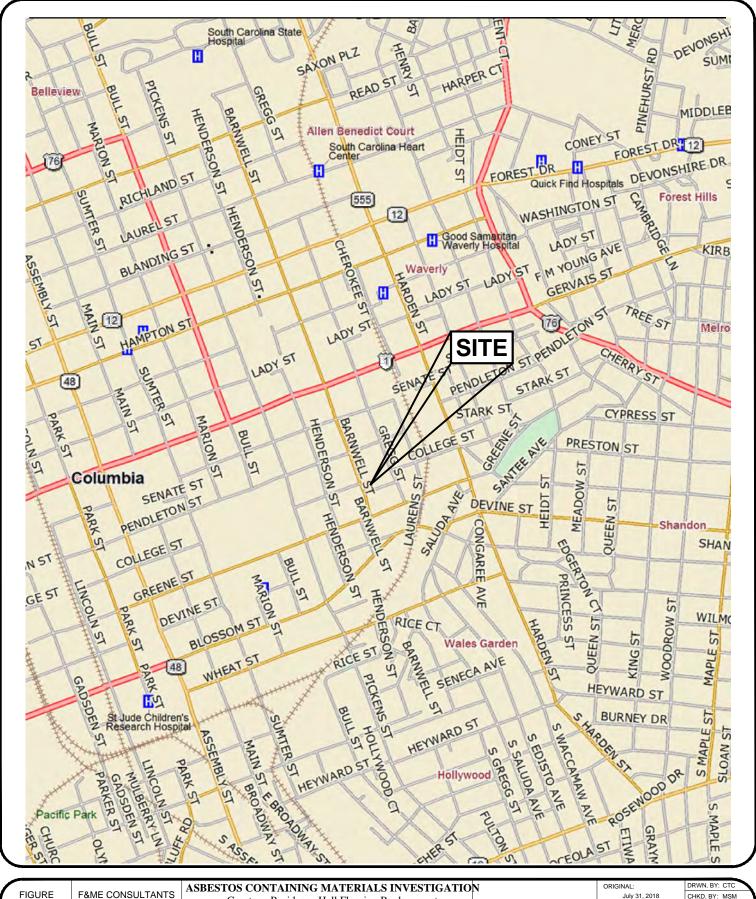
Appendix L – Regulatory Summary

Appendix M – Abatement Project Forms

# **Appendix A**

**Site Vicinity Map** 



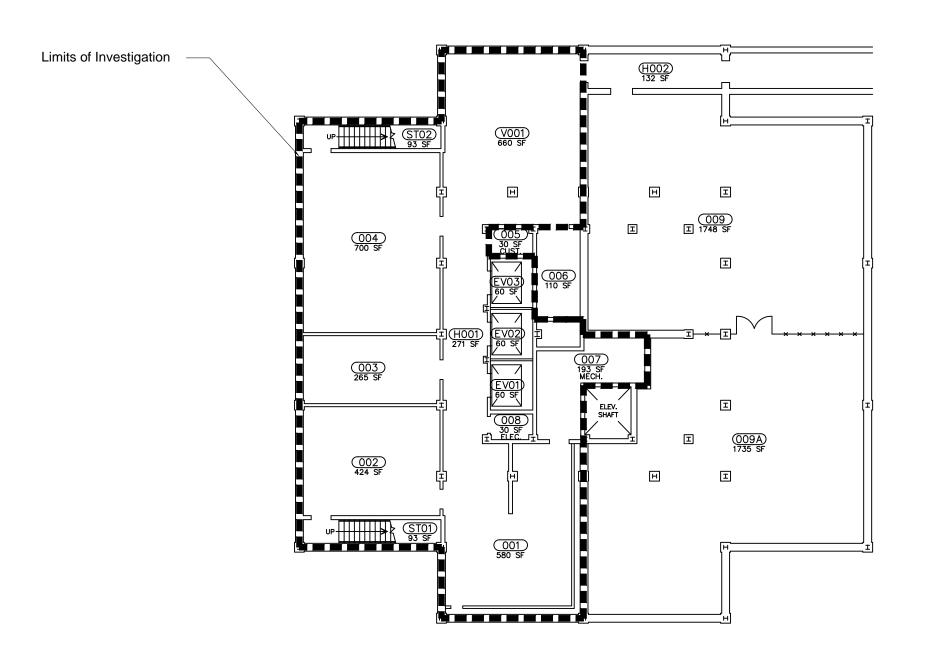


July 31, 2018 CHKD. BY: MSM Capstone Residence Hall Flooring Replacement NUMBER: PROJECT NUMBER: APPR. BY: GME F&ME 902 Barnwell Street REVISIONS: Columbia, SC 29208 NOTES Appendix A - Site Location Plan 1 E5700.330 3112 Devine Street Prepared for: Columbia, SC 29205 SCALE Facilities Planning and Construction As Shown 743 Greene Street Columbia, SC 29208

# **Appendix B**

# **General Building Plans**





BASEMENT FLOOR PLAN - 039

SCALE: 1/16" = 1'-0"

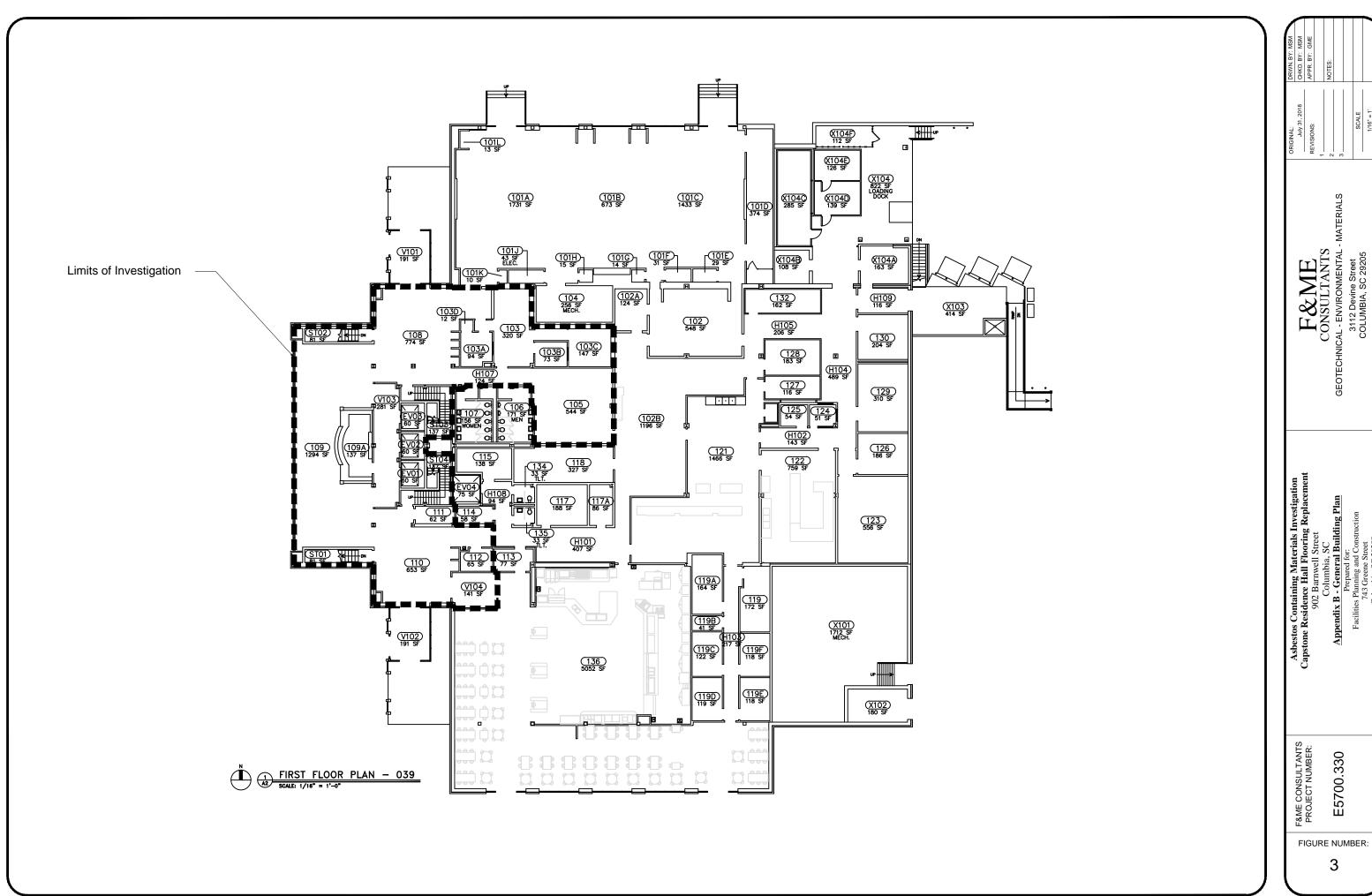
F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
3112 Devine Street
COLUMBIA, SC 29205

Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - General Building Plan
Prepared for

IMBER: Cal

FRME CONSULTANTS
PROJECT NUMBER:
E5700.330

FIGURE NUMBER:

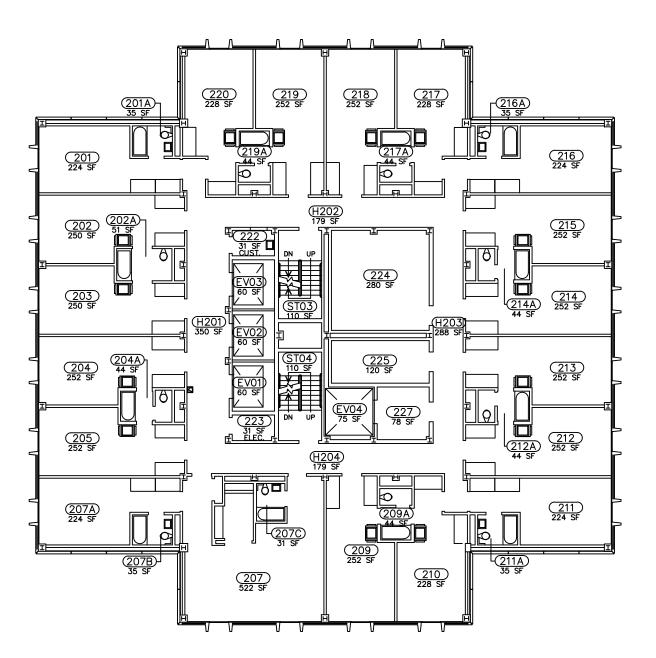


Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - General Building Plan
Prepared for:

FIGURE NUMBER:

3

E5700.330



TWO THROUGH SIXTEEN FLOOR PLAN (TYPICAL) - 039

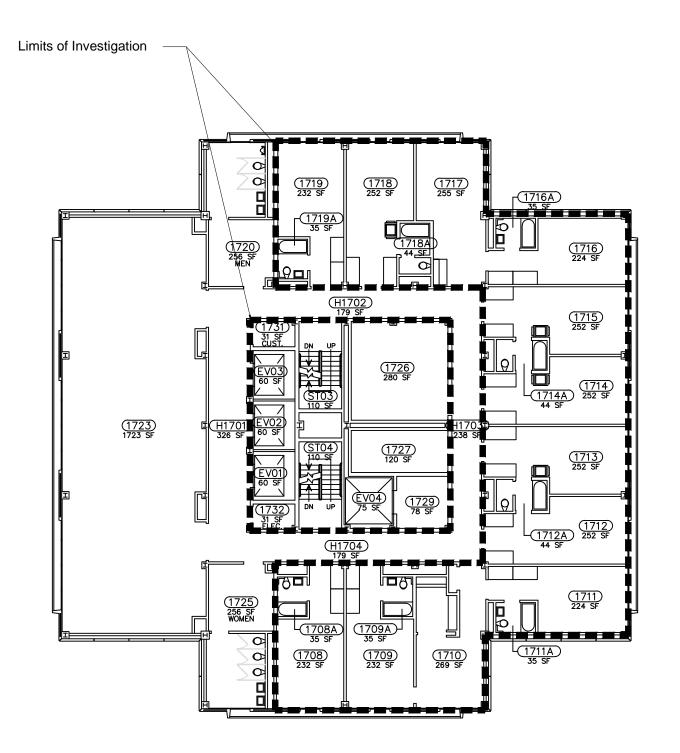
SCALE: 1/16" = 1'-0"

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3112 Devine Street
COLUMBIA, SC 29205

Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - General Building Plan
Prepared for:

F&ME CONSULTANTS PROJECT NUMBER: E5700.330

FIGURE NUMBER:



SEVENTEENTH FLOOR PLAN - 039

SCALE: 1/16" = 1'-0"

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Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - General Building Plan
Prepared for:

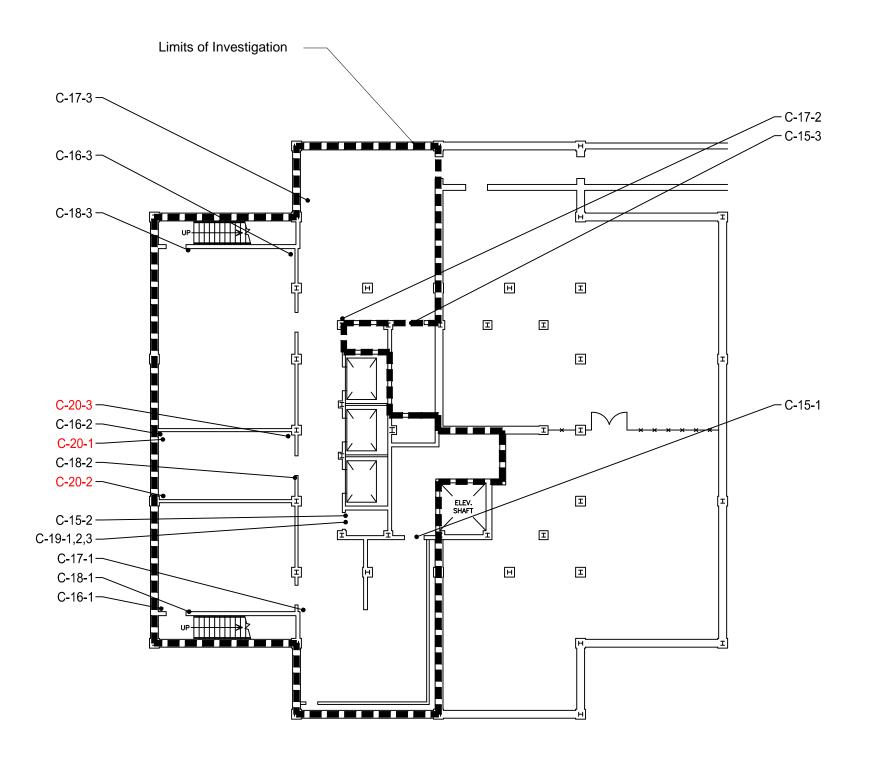
PROJECT NUMBER: E5700.330

FIGURE NUMBER:

# **Appendix C**

**Sample Location Plans** 





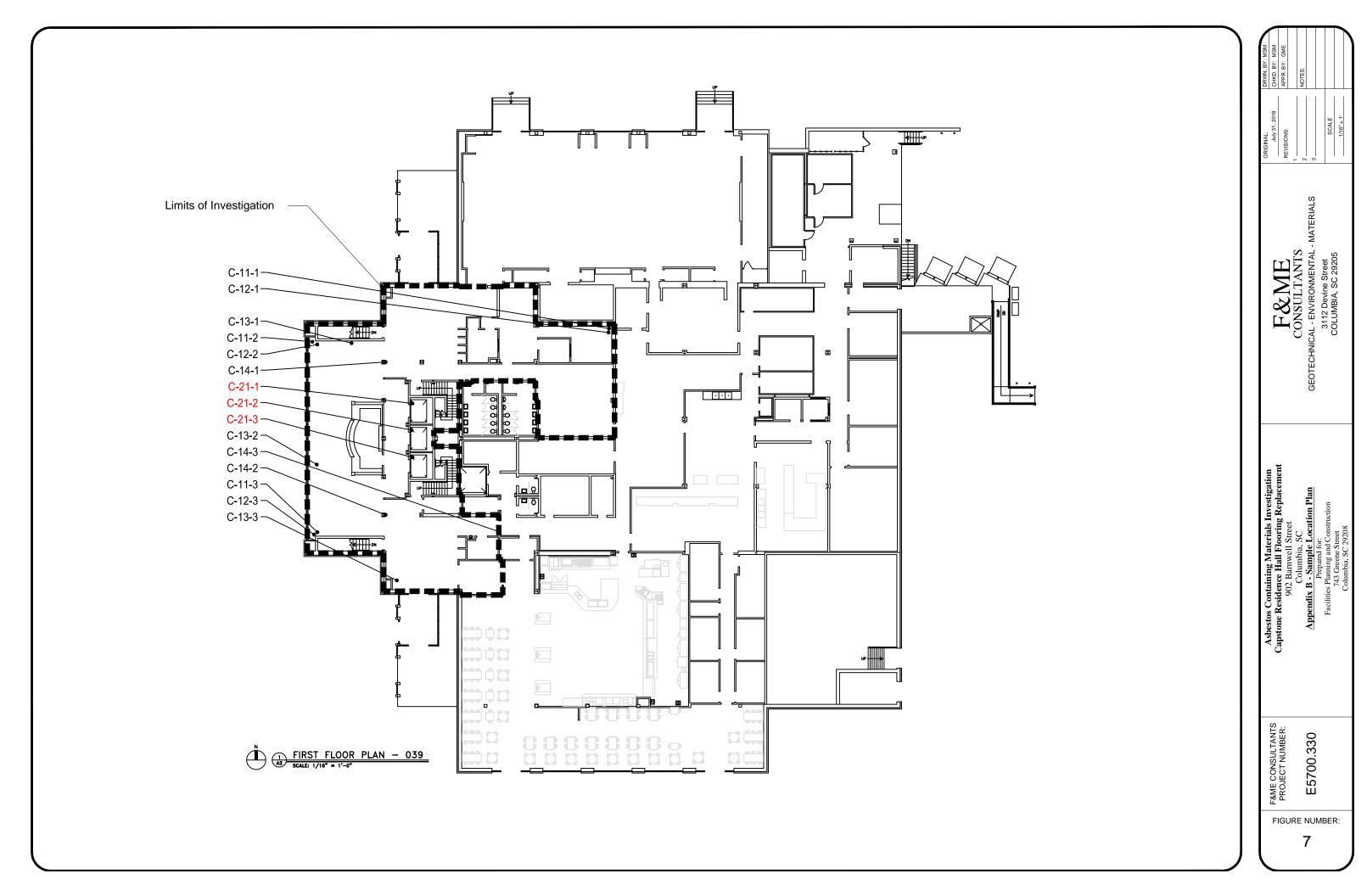


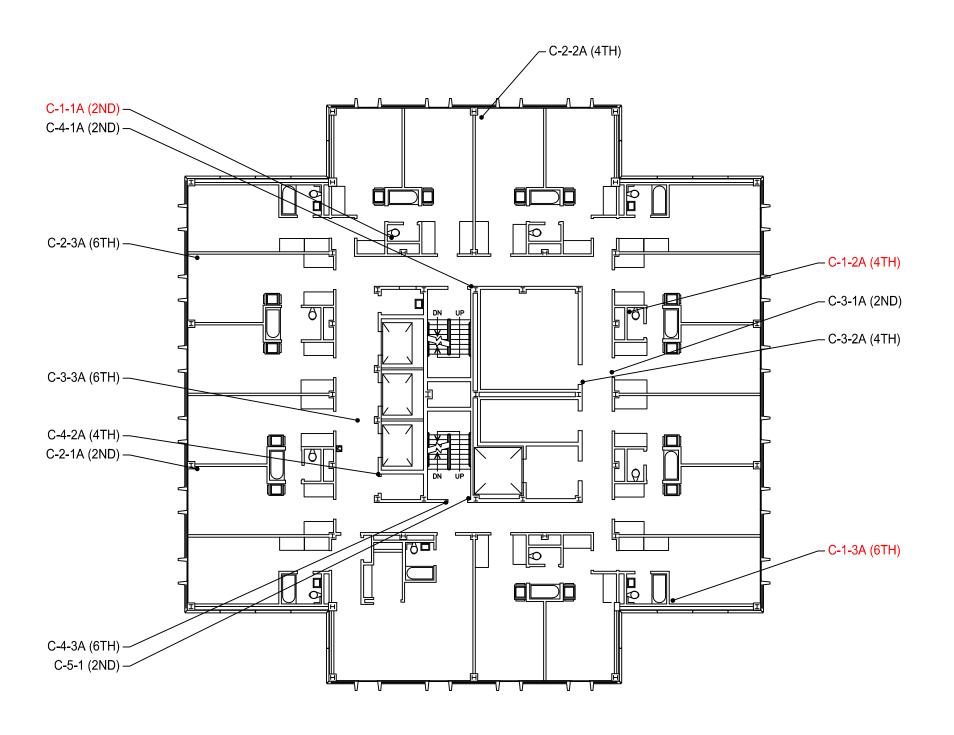
BASEMENT FLOOR PLAN - 039 1 BASEMEINI I I SCALE: 1/16" = 1'-0"

Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - Sample Location Plan
Prepared for:

F&ME CONSULTANTS PROJECT NUMBER: E5700.330

FIGURE NUMBER: 6





TWO THROUGH SIX FLOOR PLAN (TYPICAL) - 039

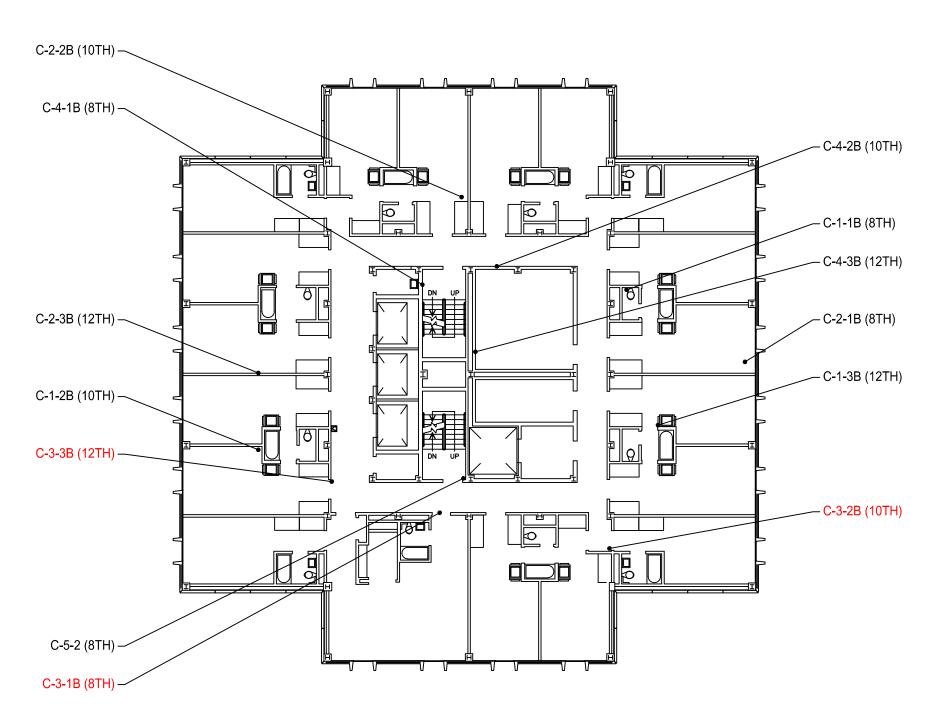
SCALE: 1/16" = 1'-0"

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3112 Devine Street
COLUMBIA, SC 29205

Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - Sample Location Plan
Prepared for:

F&ME CONSULTANTS PROJECT NUMBER:

FIGURE NUMBER:



Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - Sample Location Plan
Prepared for:

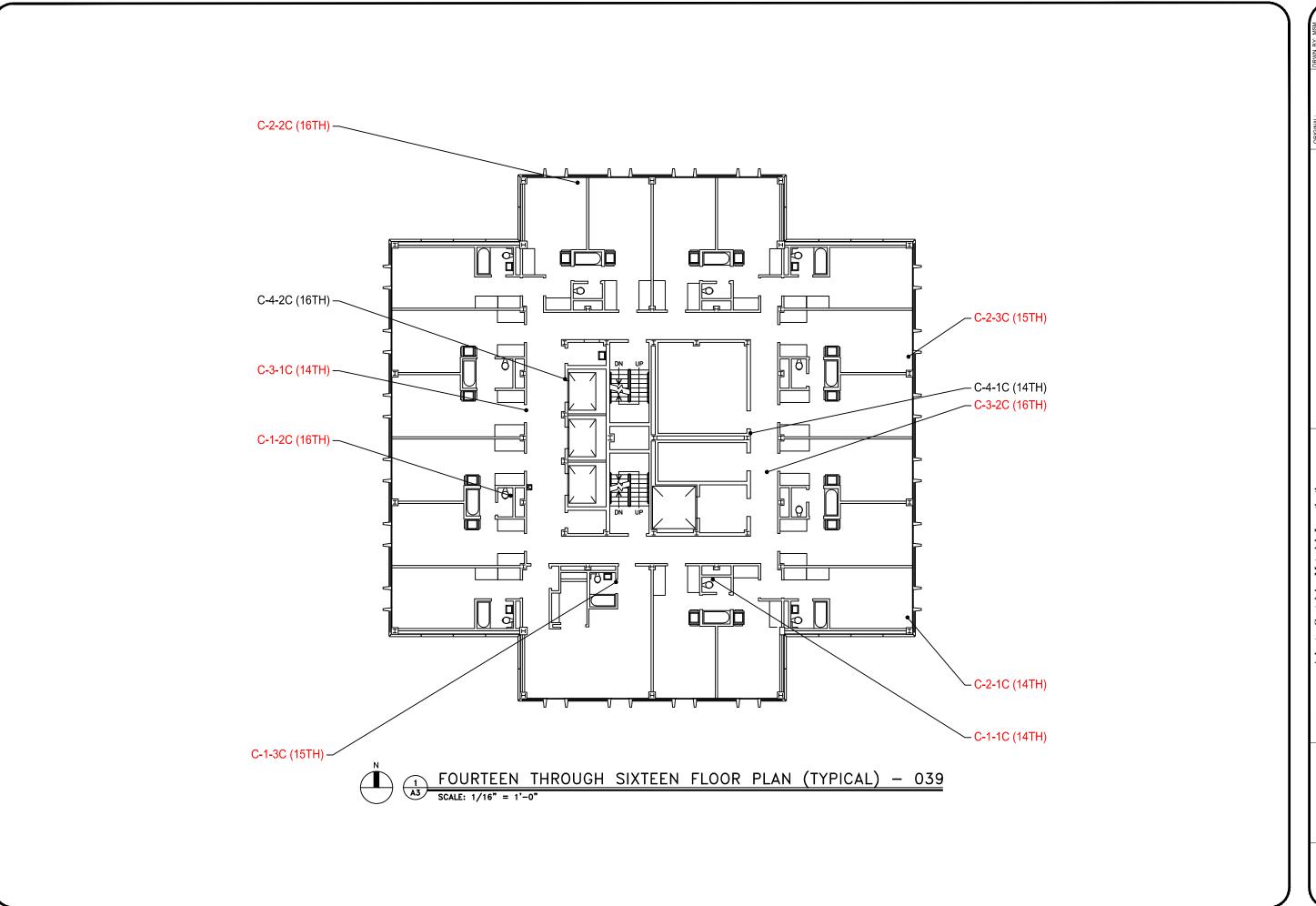
F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - M
3112 Devine Street
COLUMBIA, SC 29205

F&ME CONSULTANTS PROJECT NUMBER:

FIGURE NUMBER:

EIGHT THROUGH TWELVE FLOOR PLAN (TYPICAL) - 039

SCALE: 1/16" = 1'-0"

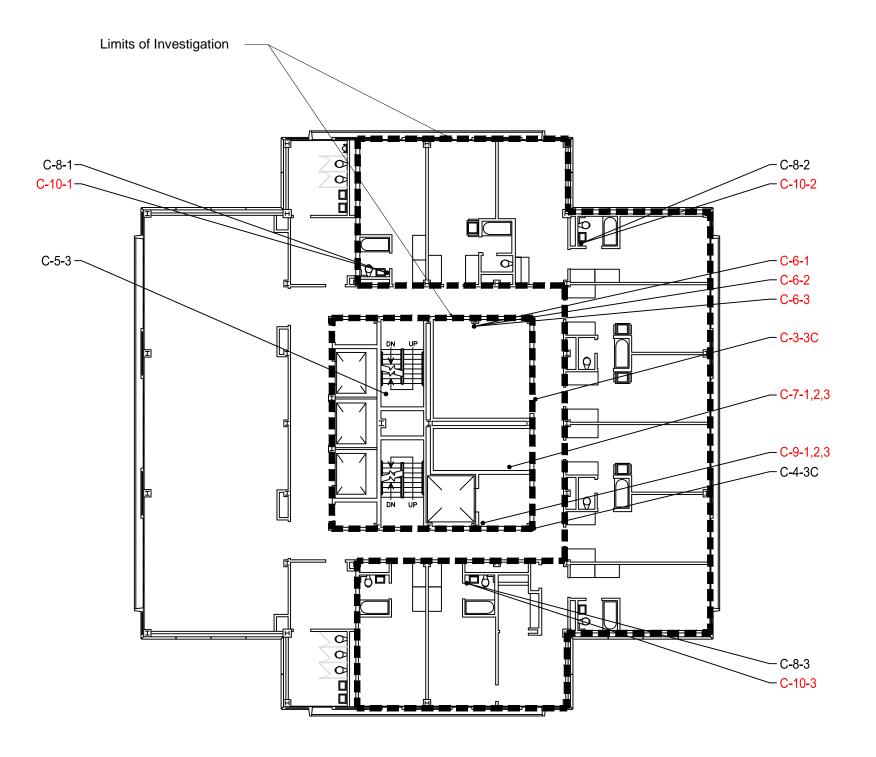


Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
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Appendix B - Sample Location Plan
Prepared for:

FRME CONSULTANTS
PROJECT NUMBER:
E5700.330

FIGURE NUMBER:

10





F&ME CONSULTANTS GEOTECHNICAL - ENVIRONMENTAL - IN 3112 Devine Street COLUMBIA, SC 29205

Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - Sample Location Plan
Prepared for:

E5700.330

F&ME CONSULTANTS PROJECT NUMBER:

FIGURE NUMBER:

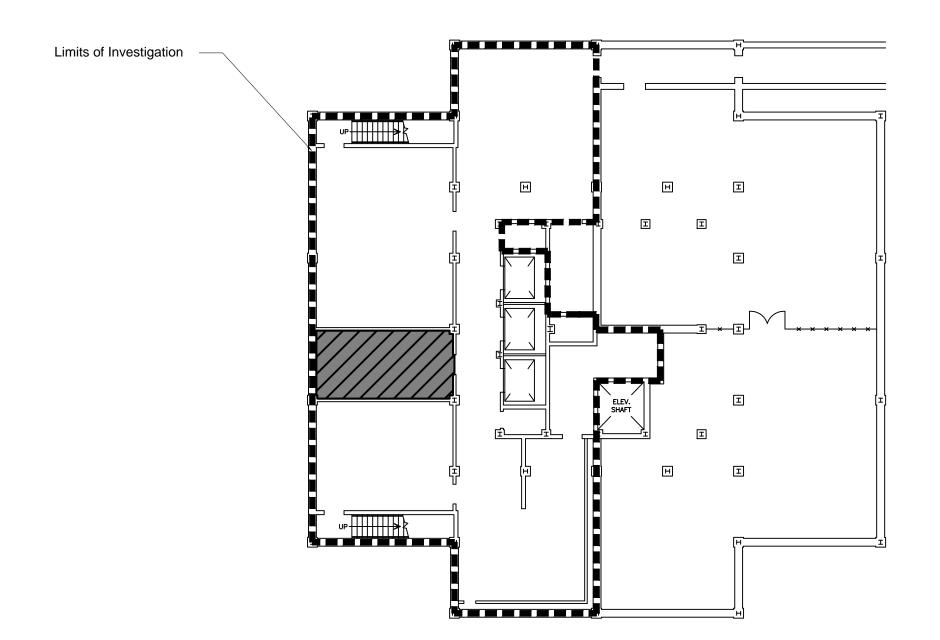
11

# **Appendix D**

**Homogeneous Area Plans** 



Carpet Overlay





Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - Homogeneous Area Plan
Propagation

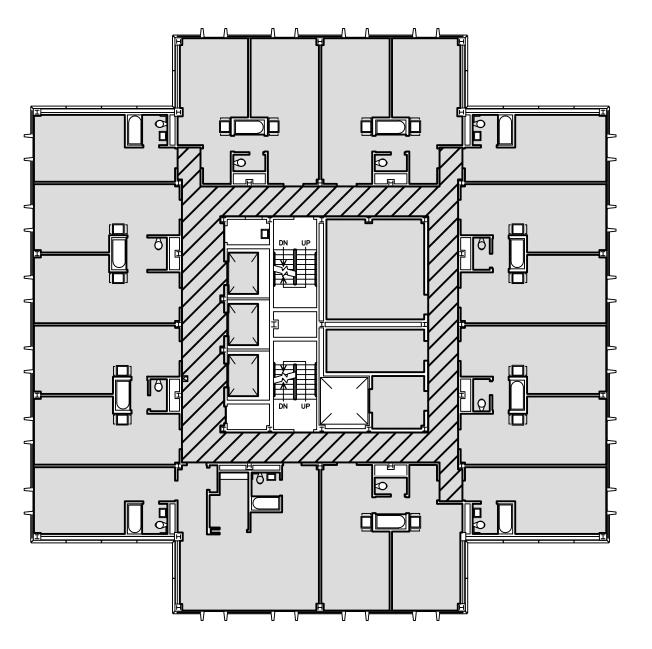
F&ME CONSULTANTS PROJECT NUMBER: E5700.330

FIGURE NUMBER:

12

HA-1 - Residual Black Mastic under Non-ACM Floor Tiles & Carpeting

Carpet Overlay



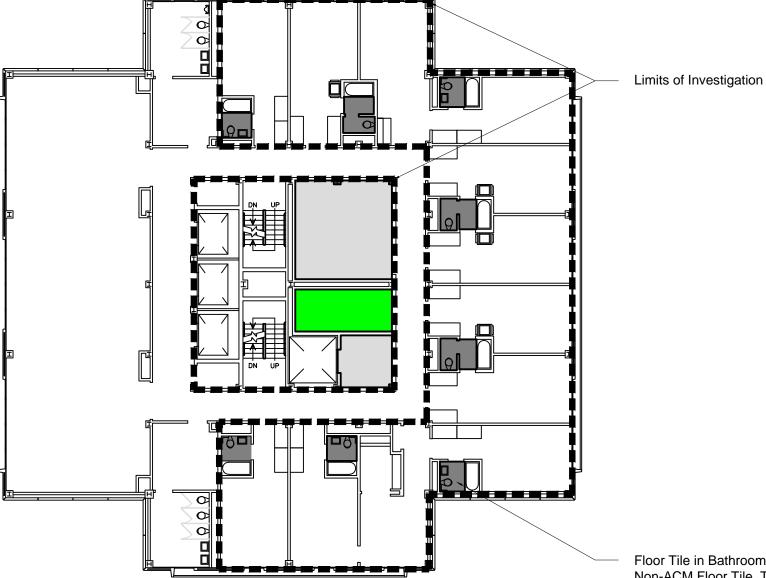


Asbestos Containing Materials Investigation
Capstone Residence Hall Flooring Replacement
902 Barnwell Street
Columbia, SC
Appendix B - Homogeneous Area Plan

FIGURE NUMBER:

HA-2 - 12" x 12" Off-White Floor Tile & Mastic under 12" x 12" Non-ACM Black Floor Tile

HA-3 - Green/White Linoleum Flooring



Floor Tile in Bathrooms under Secondary Layer of Non-ACM Floor Tile. Typical Bathrooms on Seventeenth Floor.



ORIGINAL: DRWN. BY: MSM July 31, 2018 CHKD. BY: MSM REVISIONS: APPR. BY: GME  1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
SEVIS	DRWN. BY: MSM	CHKD. BY: MSM APPR. BY: GME		NOTES:			
	ORIGINAL:	SEVISIONS:	1	2	8	SCALE	1/16"= 1'

F&ME
CONSULTANTS
CHNICAL - ENVIRONMENTAL - MATER
3112 Devine Street
COLLIMBIA SC 20205

e Residence Hall Flooring Replacement 902 Barnwell Street Columbia, SC Dendix B - Homogeneous Area Plan Prepared for:

F&ME CONSULTANTS
PROJECT NUMBER:
E5700.330

FIGURE NUMBER:

14

# **Appendix E**

**Summary of Samples** 



### **Appendix E: Summary of Samples**

Sample ID	Description
C-1-1A	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-2A	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-3A	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-1B	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-2B	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-3B	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-1C	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-2C	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C1-3C	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-1A	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-2A	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-3A	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-1B	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-2B	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-3B	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-1C	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-2C	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C2-3C	12"x12" OW w/Brown &Teal Floor Tile/Mastic
C3-1A	Carpet Adhesive
C3-2A	Carpet Adhesive
C3-3A	Carpet Adhesive
C3-1B	Carpet Adhesive
C3-2B	Carpet Adhesive
C3-3B	Carpet Adhesive
C3-1C	Carpet Adhesive
C3-2C	Carpet Adhesive
C3-3C	Carpet Adhesive
C4-1A	Baseboard Adhesive
C4-2A	Baseboard Adhesive
C4-3A	Baseboard Adhesive
C4-1B	Baseboard Adhesive
C4-2B	Baseboard Adhesive
C4-3B	Baseboard Adhesive
C4-1C	Baseboard Adhesive
C4-2C	Baseboard Adhesive
C4-3C	Baseboard Adhesive
C5-1	Rubber Stairway Tread Adhesive Only



### **Appendix E: Summary of Samples**

Sample ID	Description
C5-2	Rubber Stairway Tread Adhesive Only
C5-3	Rubber Stairway Tread Adhesive Only
C6-1	12"x12" Blue w/ White Streaks Floor Tile/ Mastic
C6-2	12"x12" Blue w/ White Streaks Floor Tile/ Mastic
C6-3	12"x12" Blue w/ White Streaks Floor Tile/ Mastic
C7-1	Green/ White Roll Linoleum Floor Tile/ Mastic
C7-2	Green/ White Roll Linoleum Floor Tile/ Mastic
C7-3	Green/ White Roll Linoleum Floor Tile/ Mastic
C8-1	12"x12" Black Floor Tile/Mastic
C8-2	12"x12" Black Floor Tile/Mastic
C8-3	12"x12" Black Floor Tile/Mastic
C9-1	18"x18" Brown/Tan Floor Tile/ Mastic
C9-2	18"x18" Brown/Tan Floor Tile/ Mastic
C9-3	18"x18" Brown/Tan Floor Tile/ Mastic
C10-1	12"x12" White Floor Tile/ Mastic under Black Floor Tiles (17th Floor)
C10-2	12"x12" White Floor Tile/ Mastic under Black Floor Tiles (17 <sup>th</sup> Floor)
C10-3	12"x12" White Floor Tile/ Mastic under Black Floor Tiles (17th Floor)
C11-1	12"x12" OW/ Tan Floor Tile/ Mastic
C11-2	12"x12" OW/ Tan Floor Tile/ Mastic
C11-3	12"x12" OW/ Tan Floor Tile/ Mastic
C12-1	12"x12" Tan Floor Tile/ Mastic
C12-2	12"x12" Tan Floor Tile/ Mastic
C12-3	12"x12" Tan Floor Tile/ Mastic
C13-1	12"x12" Green Floor Tile/ Mastic
C13-2	12"x12" Green Floor Tile/ Mastic
C13-3	12"x12" Green Floor Tile/ Mastic
C14-1	Baseboard Mastic Only
C14-2	Baseboard Mastic Only
C14-3	Baseboard Mastic Only
C15-1	Quarry Tile Mortar Bed
C15-2	Quarry Tile Mortar Bed
C15-3	Quarry Tile Mortar Bed
C16-1	Carpet Adhesive
C16-2	Carpet Adhesive
C16-3	Carpet Adhesive
C17-1	Black Expansion Joint Caulk
C17-2	Black Expansion Joint Caulk



### **Appendix E: Summary of Samples**

Sample ID	Description
C17-3	Black Expansion Joint Caulk
C18-1	Baseboard Adhesive Only
C18-2	Baseboard Adhesive Only
C18-3	Baseboard Adhesive Only
C19-1	Black Waterproofing Material
C19-2	Black Waterproofing Material
C19-3	Black Waterproofing Material
C20-1	12"x12" OW Floor Tile/ Mastic
C20-2	12"x12" OW Floor Tile/ Mastic
C20-3	12"x12" OW Floor Tile/ Mastic
C21-1	12"x12" Brown Elevator Tiles/ Mastic
C21-2	12"x12" Brown Elevator Tiles/ Mastic
C21-3	12"x12" Brown Elevator Tiles/ Mastic



# **Appendix F**

**Summary of Asbestos Containing Materials** 



### APPENDIX F: SUMMARY OF ASBESTOS CONTAINING MATERIALS

Sample ID	Sample Description	Layer	% Asbestos
C1-1A	12"x12" w/ Brown & Teal	Tile	None Detected
CI-IA	Floor Tiles/Mastic	Mastic	2% Chrysotile
C1-2A	12"x12" w/ Brown & Teal	Tile	None Detected
C1-2/A	Floor Tiles/Mastic	Mastic	Positive Stop
C1-3A	12"x12" w/ Brown & Teal	Tile	None Detected
C1 311	Floor Tiles/Mastic	Mastic	Positive Stop
C1-1C	12"x12" w/ Brown & Teal	Tile	None Detected
01.10	Floor Tiles/Mastic	Mastic	2% Chrysotile
C1-2C	12"x12" w/ Brown & Teal	Tile	None Detected
C1-2C	Floor Tiles/Mastic	Mastic	Positive Stop
C1-3C	12"x12" w/ Brown & Teal	Tile	None Detected
C1-3C	Floor Tiles/Mastic	Mastic	Positive Stop
C2-1C	12"x12" w/ Brown & Teal	Tile	None Detected
C2-1C	Floor Tiles/Mastic	Mastic	3% Chrysotile
C2-2C	12"x12" w/ Brown & Teal	Tile	None Detected
C2-2C	Floor Tiles/Mastic	Mastic	Positive Stop
C2-3C	12"x12" w/ Brown & Teal	Tile	None Detected
C2-3C	Floor Tiles/Mastic	Mastic	Positive Stop
C3-1B	Carpet Adhesive	Tan/Black/ Orange	3% Chrysotile
C3-2B	Carpet Adhesive	Tan/Beige	Positive Stop
C3-3B	Carpet Adhesive	Tan	Positive Stop
C3-1C	Carpet Adhesive	Tan/Black/ Orange	2% Chrysotile
C3-2C	Carpet Adhesive		Positive Stop
C3-3C	Carpet Adhesive		Positive Stop
06.1	10" 10" DI EL T'I /M ('	Tile	None Detected
C6-1	12"x12" Blue Floor Tile/ Mastic	Mastic	8% Chrysotile
		Tile	None Detected
C6-2	12"x12" Blue Floor Tile/ <mastic< td=""><td>Mastic</td><td>Positive Stop</td></mastic<>	Mastic	Positive Stop
C6-3	12"x12" Blue Floor Tile/ Mastic	Tile	None Detected
C0-3	12 X12 Diuc Pioor Tile/ iviastic	Mastic	Positive Stop
C7-1	Green/ White Roll Linoleum Floor Tile		30% Chrysotile
C7-2	Green/ White Roll Linoleum Floor Tile		Positive Stop
C7-3	Green/ White Roll Linoleum Floor Tile		Positive Stop
C9-1	18"x18" Brown/Tan Floor Tile/ Mastic	Tile	None Detected
C9-1	10 X10 DIOWII/ Tall Floor Tile/ Mastic	Mastic	3% Chrysotile

### APPENDIX F: SUMMARY OF ASBESTOS CONTAINING MATERIALS

Sample ID	Sample Description	Layer	% Asbestos
C9-2	18"x18" Brown/Tan Floor Tile/ Mastic	Tile	None Detected
C9-2	18 x 18 Brown/ ran Proof The/ Wastic	Mastic	Positive Stop
C9-3	18"x18" Brown/Tan Floor Tile/ Mastic	Tile	None Detected
C9-3	18 X18 BIOWII/Taii Fiooi Tile/ Wastic	Mastic	Positive Stop
C10-1	12"x12" White Floor Tile/Mastic	Tile	5% Chrysotile
C10-1	(Under Black Tile 17 <sup>th</sup> Floor)	Mastic	8% Chrysotile
C10-2	12"x12" White Floor Tile/Mastic	Tile	Positive Stop
C10-2	(Under Black Tile 17 <sup>th</sup> Floor)	Mastic	Positive Stop
C10-3	12"x12" White Floor Tile/Mastic	Tile	Positive Stop
C10-3	(Under Black Tile 17 <sup>th</sup> Floor)	Mastic	Positive Stop
C12-1	12"x12" Tan Floor Tile/ Mastic	Tile	None Detected
C12-1	12 X12 Tail 11001 The/ Wastie	Mastic	<1% Chrysotile
C12-2	12"x12" Tan Floor Tile/ Mastic	Tile	None Detected
C12-2	C12-2 12"x12" Ian Floor Tile/ Mastic		None Detected
C12-3	12"x12" Tan Floor Tile/ Mastic	Tile	None Detected
C12-3	12 X12 Tail 11001 The/ Wastie	Mastic	None Detected
C20-1	12"x12" OW Floor Tile/ Mastic	Tile	3% Chrysotile
C20-1	12 A12 OW 11001 THE Waste	Mastic	8% Chrysotile
C20-2	12"x12" OW Floor Tile/ Mastic	Tile	Positive Stop
C20 Z	12 X12 OW 11001 THE Waste	Mastic	Positive Stop
C20-3	12"x12" OW Floor Tile/ Mastic	Tile	Positive Stop
C20 3	12 X12 OW 11001 THE Waste	Mastic	Positive Stop
		Brown Tile	None Detected
		Mastic 1	None Detected
C21-1	12"x12" Brown Elevator Floor Tiles	Tan Tile	None Detected
021 1	12 KIZ BIOWII ZICVIII OI TIICS	Mastic 2	2% Chrysotile
		White Tile	None Detected
		Mastic 3	8% Chrysotile
		Brown Tile	None Detected
		Mastic 1	None Detected
C21-2	12"x12" Brown Elevator Floor Tiles	Tan Tile	None Detected
	12 Mil Bio Mil Bio Milot Thos	Mastic 2	Positive Stop
		White Tile	None Detected
		Mastic 3	Positive Stop
		Brown Tile	None Detected
		Mastic 1	None Detected
001.0	102 102 D EL / EL / EL	Tan Tile	None Detected
C21-3	12"x12" Brown Elevator Floor Tiles	Mastic 2	Positive Stop
		White Tile	None Detected
		Mastic 3	Positive Stop



# **Appendix G**

**Summary of Inspection** 



#### **SUMMARY OF INSPECTION**

#### **SUMMARY OF INSPECTION**

The following tables summarize the physical assessment data, sampling and assessment results.

As exhibited on these tables, coding is used to abbreviate the asbestos containing materials' (ACM) locations, characteristics and results. These codes are as follows:

#### **TYPES OF ACM:**

Misc. = Miscellaneous

Sur. = Surfacing

TSI = Thermal System Insulation

#### **ACM LOCATIONS:**

Homogeneous areas = Indicated by Roman Numerals, Room Number or Area Designation

Functional Space No.:	Functional Space Type:		
1.	R	Room	
2.	H Hallway		
3.	BR	Bathroom	
4.	SR	Storage Room	
5.	EC	Elevators Cars	

#### **ACM CHARACTERISTICS:**

F = Friable

NF = Non-Friable

### **ASSESSMENT RESULTS:**

(Refer to Physical Assessment Data)

#### POTENTIAL FOR DISTURBANCE:

(Refer to Physical Assessment Data)

#### **SUMMARY OF INSPECTION**

### PHYSICAL ASSESSMENT CATAGORIES:

- 1. Damaged or significantly damaged friable thermal system insulation ACM.
- 2. Damaged friable surfacing ACM.
- 3. Significantly damaged friable surfacing ACM.
- 4. Damaged or significantly damaged friable miscellaneous ACM.
- 5. ACM with potential for significant damage.
- 6. ACM with potential for damage.
- 7. Any remaining friable ACM or friable suspect ACM.
- 8. Non-friable ACM.

### **CLASSIFICATION FOR HAZARD POTENTIAL:**

(Tabular Display)

<u>Hazard</u> <u>Rank</u>	<b>ACM Condition</b>	<b>ACM Disturbance Potential</b>
7	Significantly Damaged	Any
6	Damaged	Potential for Significant Damage
5	Damaged	Potential for Damage
4	Damaged	Low
3	Good	Potential for Significant Damage
2	Good	Potential for Damage
1	Good	Low

# **Appendix H**

**Physical Assessment Data Sheets** 



### PHYSICAL ASSESSMENT DATA SHEET

building: USC Ca	pstone i looring i	CHO vation	(Housing Secure	)11 <i>)</i>			
<b>Functional Space No:</b>	1, 2, 4, 5	Type:	R, H, SR, EC	<b>Location</b> :	(See Ho	mogeneou	ıs Area Plan)
Type of Suspect Material:		_ TSI		Surfacing	X	Misc.	
Description:	HA-1, Residual	Black Mas	tic under Non-A	CM Floor Ti	les & Car	rpeting	
Approximate Amount of Material	(SF or LF):	>5,000 S	F				
<b>Condition</b> :							
Percent Damage:	<b>X</b> >0%		<10%	>10%		<25%	>25%
Extent of Damage:	X	_ Localize	d		Distribut	ted	
Type of Damage:			ation				Physical
Description:							
	nastic under 12" x 1 (3) residential eleva						
Overall Condi	Sig tion Rating: Da	g. imaged	Da	maged		Good	X
<b>Potential for Disturbance:</b>							
		High	Modera	te Lov	v	Friable ACM	
Frequency of Contact:	of Potential			X			_
Influence of	Vibration			X			_
Frequency of	of Air Erosion			X			_
Potential of	Water Erosion			X			_
Overall Potential Disturbance R	ating:						
		Potentia Sig. Da		ential for Damage	Lov Potenti Dama	al for	
Overall Hazard Rank #:	Sig T	Damaged	Pot. Sig. Damage	Potent Dama		Low Pot.	
	Sig. L	amageu	Damage	Dama	ge	Damage  1	
Comments: Potential for Distu	arbance and Haza		assessed is base			the facility	ý.

### PHYSICAL ASSESSMENT DATA SHEET

building: USC C	zapstone Prooring i	Xenovanon (	Housing Sec	uon)		
<b>Functional Space No:</b>	1, 3	Type:	R, BR	<b>Location</b> :	(See Homogene	ous Area Plan)
Type of Suspect Material:		_ TSI _		Surfacing	X Mis	sc.
Description:	HA-2, 12" x 12	"Off-White	Floor Tiles &	& Associated M	lastic	
Approximate Amount of Materia	al (SF or LF):	~575 SF				
Condition:						
Percent Damage:	<b>X</b> >0%		<10%	>10%	<25%	>25%
Extent of Damage:	X	Localized			Distributed	
Type of Damage:	X					Physical
Description:						
	' off-white floor tiles and under carpet in					
Overall Con	Sig dition Rating: Da	g. ımaged _	I	Damaged	Good	X
Potential for Disturbance:						
		High	Mode	rate Lov	Friable v ACM	
Frequency Contact:	of Potential			X		
Influence	of Vibration			X		
Frequency	of Air Erosion			X		
Potential of	of Water Erosion			X		
Overall Potential Disturbance	Rating:					
		Potentia Sig. Dan		Potential for Damage	Low Potential for Damage 8	
Overall Hazard Rank #:	G:- T	<b></b> 1	Pot. Sig.			
	Sig. L	Damaged	Damage	Dama;	ge Dama,	
<u>Comments</u> : Potential for Dis	sturbance and Haza	ard Ranking	assessed is ba	ased on current	usage of the facil	lity.
Signed: M	be Mu	ay	<u>D</u>	ate: 08/02/20	18	

### PHYSICAL ASSESSMENT DATA SHEET

Functional Space No:	4	Type:			(See Hom	nogeneou	s Area Plan)
Type of Suspect Material:		TSI		Surfacing	X	Misc.	
Description:	HA-3, Green/W		m Flooring			_	
Approximate Amount of Material		~120 SF					
Condition:							
Percent Damage:	<b>X</b> >0%		<10%	>10%	</td <td>25%</td> <td>&gt;25%</td>	25%	>25%
Extent of Damage:				X			
Type of Damage:				Water			Physical
Description:							•
	rial is located in roo moval of this materi	al will render					riable condition.
Overall Condi	Sig tion Rating: Da	g. ımaged _	1	Damaged	(	Good	X
<b>Potential for Disturbance:</b>							
		High	Mode	rate Lov		Friable ACM	
Frequency of Contact:	of Potential			X			_
Influence of	Vibration			X			_
Frequency of	of Air Erosion			X			_
Potential of	Water Erosion			X			_
Overall Potential Disturbance R	ating:						
		Potential Sig. Dan		Potential for Damage	Low Potential Damag	l for	
Overall Hazard Rank #:			Pot. Sig.	. Potent	io1 1	Low Pot.	
	Sig. D	Damaged	Damage			Damage	
						1	<u></u>
<u>Comments</u> : Potential for Distu		_	assessed is b	ased on current	usage of th	e facility	·.
Signed: Md	he Mu	ay	<u>D</u>	ate: 08/02/20	18		

# Appendix I

**Laboratory Analysis Reports** 





1825 Blanding Street

Columbia, SC 29201

EMSL Order: 021805232 Customer ID: FMEC62 Customer PO: E5924.000

Project ID:

**Phone:** (803) 254-4540

Fax: (803) 254-4542

**Received Date:** 07/27/2018 9:30 AM **Analysis Date:** 07/31/2018 - 08/01/2018

Collected Date: 07/26/2018

Project: USC - Capstone Flooring

Attention: Glynn M. Ellen

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

		Non-Asbestos						
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type			
C1-1A-Floor Tile	12X12 OW w/ Brown/Teal Floor Tile/Mastic	White/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected			
C1-1A-Mastic	12X12 OW w/ Brown/Teal Floor	Tan/Black/Yellow Fibrous	5% Cellulose <1% Synthetic	93% Non-fibrous (Other)	2% Chrysotile			
021805232-0001A	Tile/Mastic	Heterogeneous						
C1-2A-Floor Tile	12X12 OW w/ Brown/Teal Floor Tile/Mastic	White/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected			
C1-2A-Mastic	12X12 OW w/ Brown/Teal Floor				Positive Stop (Not Analyzed)			
021805232-0002A	Tile/Mastic							
C1-1B-Floor Tile	12X12 OW w/ Brown/Teal Floor Tile/Mastic	White/Green/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected			
C1-1B-Mastic	12X12 OW w/ Brown/Teal Floor Tile/Mastic	Tan/Black/Yellow Fibrous Heterogeneous	5% Cellulose 1% Synthetic	94% Non-fibrous (Other)	<1% Chrysotile			
C1-2B-Floor Tile	12X12 OW w/ Brown/Teal Floor Tile/Mastic	White/Green/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected			
C1-2B-Mastic	12X12 OW w/ Brown/Teal Floor	Tan/Black Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	<1% Chrysotile			
021805232-0004A	Tile/Mastic	Homogeneous						
C1-1C-Floor Tile	12X12 OW w/ Brown/Teal Floor Tile/Mastic	White/Green/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected			
C1-1C-Mastic	12X12 OW w/ Brown/Teal Floor Tile/Mastic	Black/Orange Non-Fibrous Homogeneous	1% Cellulose	97% Non-fibrous (Other)	2% Chrysotile			
C1-2C-Floor Tile	12X12 OW w/	White/Green/Beige		25% Quartz	None Detected			
021805232-0006	Brown/Teal Floor Tile/Mastic	Non-Fibrous Homogeneous		75% Non-fibrous (Other)	None Detected			
C1-2C-Mastic	12X12 OW w/ Brown/Teal Floor				Positive Stop (Not Analyzed)			
021805232-0006A	Tile/Mastic							
C2-1A-Floor Tile	12x12 Brown Floor/Mastic	Beige Non-Fibrous		25% Quartz 75% Non-fibrous (Other)	None Detected			
	12v12 Proves	Homogeneous Vollow/Reige/Orang	<10/ Collisions	1009/ Non fibrous (Other)	None Detected			
C2-1A-Mastic 021805232-0007A	12x12 Brown Floor/Mastic	Yellow/Beige/Orang e Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected			
C2-2A-Floor Tile	12x12 Brown Floor/Mastic	Beige Non-Fibrous		25% Quartz 75% Non-fibrous (Other)	None Detected			
021805232-0008		Homogeneous						
C2-2A-Mastic	12x12 Brown Floor/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected			



1825 Blanding Street

Columbia, SC 29201

EMSL Order: 021805232 Customer ID: FMEC62 Customer PO: E5924.000

Project ID:

Phone: (803) 254-4540 Fax: (803) 254-4542

Received Date: 07/27/2018 9:30 AM

**Analysis Date:** 08/02/2018 **Collected Date:** 07/26/2018

Project: USC - Capstone Flooring

Attention: Glynn M. Ellen

# Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
C1-3A-Floor Tile 021805232-0059	12X12 OW w/ Brown/Teal Floor Tile/Mastic	White/Various Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C1-3B-Floor Tile 021805232-0060	12X12 OW w/ Brown/Teal Floor Tile/Mastic	Various/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C1-3B-Mastic 021805232-0061	12X12 OW w/ Brown/Teal Floor Tile/Mastic	Brown/Tan/Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C1-3C-Floor Tile 021805232-0062	12X12 OW w/ Brown/Teal Floor Tile/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C2-3A-Floor Tile 021805232-0063	12x12 Brown Floor/Mastic	Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C2-3A-Mastic 021805232-0064	12x12 Brown Floor/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C2-3B-Floor Tile 021805232-0065	12x12 Brown Floor/Mastic	Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C2-3B-Mastic 021805232-0066	12x12 Brown Floor/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C2-3C-Floor Tile 021805232-0067	12x12 Brown Floor/Mastic	Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C3-3A 021805232-0068	Carpet Adhesive	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C4-3A 021805232-0069	Baseboard Adhesive Only	Brown/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C4-3B 021805232-0070	Baseboard Adhesive Only	Brown/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC



1825 Blanding Street

Columbia, SC 29201

 EMSL Order:
 021805232

 Customer ID:
 FMEC62

 Customer PO:
 E5924.000

Project ID:

**Phone:** (803) 254-4540

**Fax**: (803) 254-4542

**Received Date:** 07/27/2018 9:30 AM

**Analysis Date:** 08/02/2018 **Collected Date:** 07/26/2018

Project: USC - Capstone Flooring

Attention: Glynn M. Ellen

# Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
C4-3C 021805232-0071	Baseboard Adhesive Only	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C5-3 021805232-0072	Rubber Stairway Tread Adhesive Only	Gray/Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C6-3-Floor Tile 021805232-0073	12x12 Blue w/ White Streaks Floor Tile/Mastic	Blue Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C8-3-Floor Tile 021805232-0074	12x12 Black Floor Tile	Blue Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C8-3-Mastic 021805232-0075	12x12 Black Floor Tile	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C9-3-Floor Tile 021805232-0076	18x18 Brown/Tan Floor Tile/Mastic	Brown/Gray/Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C11-3-Floor Tile 021805232-0077	12x12 OW/ Tan Floor Tile /Mastic	Gray/White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C11-3-Mastic 021805232-0078	12x12 OW/ Tan Floor Tile /Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C12-3-Floor Tile 021805232-0079	12x12 Tan Floor Tile/Mastic	Gray/Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C12-3-Mastic 021805232-0080	12x12 Tan Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C13-3-Floor Tile 021805232-0081	12x12 Green Floor Tile /Mastic	Brown/Gray/Green Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C13-3-Mastic 021805232-0082	12x12 Green Floor Tile /Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC



1825 Blanding Street

Columbia, SC 29201

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Received Date: 07/27/2018 9:30 AM

**Analysis Date**: 08/02/2018 **Collected Date**: 07/26/2018

Project: USC - Capstone Flooring

Attention: Glynn M. Ellen

# Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
C14-3 021805232-0083	Baseboard Mastic Only	Brown/Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C15-3 021805232-0084	Quarry Tile Mortar Bed	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C16-3 021805232-0085	Carpet Adhesive	Brown/Tan/Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C17-3 021805232-0086	Black Expansion Joint Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C18-3 021805232-0087	Baseboard Adhesive Only	Brown/Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C19-3 021805232-0088	Black Waterproofing Material	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C21-3-Brown Floor Tile 021805232-0089	12x12 Brown Elevator Tiles	Brown/Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C21-3-Mastic 021805232-0090	12x12 Brown Elevator Tiles	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C21-3-Tan Floor Tile 021805232-0091	12x12 Brown Elevator Tiles	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
C21-3-White Floor Tile 021805232-0092	12x12 Brown Elevator Tiles	Gray/White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC



1825 Blanding Street

Columbia, SC 29201

 EMSL Order:
 021805232

 Customer ID:
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Project ID:

**Phone:** (803) 254-4540

**Fax:** (803) 254-4542

**Received Date:** 07/27/2018 9:30 AM

**Analysis Date**: 08/02/2018 **Collected Date**: 07/26/2018

Project: USC - Capstone Flooring

Attention: Glynn M. Ellen

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID Description Appearance % Matrix Material % Non-Asbestos Fibers Asbestos Types

Analyst(s)
Stephen Bennett (34)

Stephen Bennett, Laboratory Manager or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe		<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
C2-1B-Floor Tile	12x12 Brown Floor/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C2-1B-Mastic	12x12 Brown Floor/Mastic	Tan/Yellow Non-Fibrous	1% Cellulose	99% Non-fibrous (Other)	None Detected
021805232-0009A		Heterogeneous			
C2-2B-Floor Tile	12x12 Brown Floor/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C2-2B-Mastic	12x12 Brown Floor/Mastic	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0010A		Homogeneous			
C2-1C-Floor Tile	12x12 Brown Floor Tile/Matic	Beige Non-Fibrous		25% Quartz 75% Non-fibrous (Other)	None Detected
021805232-0011		Homogeneous			
C2-1C-Mastic	12x12 Brown Floor Tile/Matic	Tan/Black/Orange Non-Fibrous	1% Cellulose <1% Synthetic	96% Non-fibrous (Other)	3% Chrysotile
021805232-0011A	12x12 Brown Floor	Heterogeneous		35% Ougsts	None Detected
C2-2C-Floor Tile	12x12 Brown Floor Tile/Matic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C2-2C-Mastic	12x12 Brown Floor Tile/Matic				Positive Stop (Not Analyzed)
021805232-0012A					
C3-1A	Carpet Adhesive	Black/Yellow Non-Fibrous	1% Cellulose 3% Synthetic	96% Non-fibrous (Other)	<1% Chrysotile
021805232-0013		Heterogeneous			
C3-2A 021805232-0014	Carpet Adhesive	Tan/Black/Yellow Non-Fibrous Homogeneous	1% Cellulose 3% Synthetic	96% Non-fibrous (Other)	<1% Chrysotile
	Cornet Adhesive	-	10/ Callulana	OGO/ Non fibrage (Other)	20/ Chrysotile
C3-1B 021805232-0015	Carpet Adhesive	Tan/Black/Orange Non-Fibrous Heterogeneous	1% Cellulose <1% Synthetic	96% Non-fibrous (Other)	3% Chrysotile
C3-2B	Carpet Adhesive	- Hotologolioodo			Positive Stop (Not Analyzed)
021805232-0016					
C3-1C	Carpet Adhesive	Tan/Black/Orange Non-Fibrous	1% Cellulose 1% Synthetic	96% Non-fibrous (Other)	2% Chrysotile
021805232-0017		Heterogeneous			
C3-2C	Carpet Adhesive				Positive Stop (Not Analyzed)
021805232-0018					
C4-1A	Baseboard Adhesive Only	Brown/Yellow/Beige Non-Fibrous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	None Detected
021805232-0019		Heterogeneous			
C4-2A	Baseboard Adhesive Only	Brown/Beige Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0020		Homogeneous			
C4-1B 021805232-0021	Baseboard Adhesive Only	Brown/White/Yellow Non-Fibrous Heterogeneous	1% Cellulose <1% Synthetic	99% Non-fibrous (Other)	None Detected
	Panahaard Adhaaiii		<10/ Colleges	1000/ Non Shrave (Other)	None Detected
C4-2B 021805232-0022	Baseboard Adhesive Only	Brown/White/Yellow Non-Fibrous Homogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	None Detected
C4-1C	Baseboard Adhesive Only	Brown/Yellow/Beige Non-Fibrous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	None Detected
021805232-0023	,	Heterogeneous			



Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe	stos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
C4-2C 021805232-0024	Baseboard Adhesive Only	Brown/White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
C5-1	Rubber Stairway Tread Adhesive Only	Gray/Tan/Orange Fibrous	3% Cellulose 3% Synthetic	94% Non-fibrous (Other)	None Detected
021805232-0025 C5-2	Rubber Stairway Tread Adhesive Only	Heterogeneous  Brown/Tan/Beige Non-Fibrous	<1% Hair <1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	None Detected
021805232-0026		Homogeneous			
C6-1-Floor Tile	12x12 Blue w/ White Streaks Floor Tile/Mastic	Blue Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
		-	20/ Callulana	OOM Now Share (Other)	OO/ Ohmandila
C6-1-Mastic	12x12 Blue w/ White Streaks Floor Tile/Mastic	Black Fibrous Homogeneous	2% Cellulose	90% Non-fibrous (Other)	8% Chrysotile
C6-2-Floor Tile	12x12 Blue w/ White Streaks Floor Tile/Mastic	Blue Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C6-2-Mastic	12x12 Blue w/ White Streaks Floor	Homogeneous			Positive Stop (Not Analyzed)
021805232-0028A	Tile/Mastic				
C7-1	Green/White Roll Linoleum Floor	Tan/Yellow/Green Fibrous	1% Cellulose	69% Non-fibrous (Other)	30% Chrysotile
021805232-0029	Tile/Mastic	Heterogeneous			
C7-2 021805232-0030	Green/White Roll Linoleum Floor Tile/Mastic				Positive Stop (Not Analyzed)
C8-1-Floor Tile	12x12 Black Floor Tile	Black Non-Fibrous		25% Quartz 75% Non-fibrous (Other)	None Detected
021805232-0031		Homogeneous			
C8-1-Mastic	12x12 Black Floor Tile	Yellow Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0031A		Homogeneous			
C8-2-Floor Tile	12x12 Black Floor Tile	Black Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C8-2-Mastic	12x12 Black Floor Tile	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0032A		Homogeneous			
C9-1-Floor Tile	18x18 Brown/Tan Floor Tile/Mastic	Brown/Tan/Black Non-Fibrous		5% Quartz 95% Non-fibrous (Other)	None Detected
021805232-0033		Homogeneous			
C9-1-Mastic	18x18 Brown/Tan Floor Tile/Mastic	Tan/Black/Green Non-Fibrous	1% Cellulose <1% Synthetic	96% Non-fibrous (Other)	3% Chrysotile
021805232-0033A	10::10 D. /T	Heterogeneous		400/ 0	News D. C. C.
C9-2-Floor Tile 21805232-0034	18x18 Brown/Tan Floor Tile/Mastic	Brown/Tan/Black Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
C9-2-Mastic	18x18 Brown/Tan Floor Tile/Mastic				Positive Stop (Not Analyzed)
021805232-0034A					
C10-1-Floor Tile	12x12 White Floor Tile/Mastic Under Black Floor Tiles (17th Floor Bathrooms)	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 70% Non-fibrous (Other)	5% Chrysotile



Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbes	stos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
C10-1-Mastic 021805232-0035A	12x12 White Floor Tile/Mastic Under Black Floor Tiles (17th Floor Bathrooms)	Black Fibrous Homogeneous	2% Cellulose	90% Non-fibrous (Other)	8% Chrysotile
C10-2 021805232-0036	12x12 White Floor Tile/Mastic Under Black Floor Tiles (17th Floor Bathrooms)				Positive Stop (Not Analyzed)
C11-1-Floor Tile	12x12 OW/ Tan Floor Tile /Mastic	White/Beige Non-Fibrous		25% Quartz 75% Non-fibrous (Other)	None Detected
	12x12 OW/ Tan Floor	Homogeneous	1% Cellulose	97% Non-fibrous (Other)	<19/ Chrysotile
C11-1-Mastic	Tile /Mastic	Black/Yellow/Orang e Non-Fibrous Heterogeneous	2% Synthetic	91 % Noti-fibrous (Ottler)	<1% Chrysotile
C11-2-Floor Tile	12x12 OW/ Tan Floor Tile /Mastic	Tan/White/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C11-2-Mastic	12x12 OW/ Tan Floor Tile /Mastic	Tan/Black/Yellow Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	<1% Chrysotile
C12-1-Floor Tile	12x12 Tan Floor Tile/Mastic	Homogeneous  Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C12-1-Mastic	12x12 Tan Floor Tile/Mastic	Black/Yellow/Orang e	<1% Cellulose 1% Synthetic	99% Non-fibrous (Other)	<1% Chrysotile
021805232-0039A		Non-Fibrous Heterogeneous	•		
C12-2-Floor Tile	12x12 Tan Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C12-2-Mastic	12x12 Tan Floor Tile/Mastic	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
C13-1-Floor Tile	12x12 Green Floor Tile /Mastic	Homogeneous  Gray/Green/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C13-1-Mastic	12x12 Green Floor Tile /Mastic	Clear/Orange Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
C13-2-Floor Tile	12x12 Green Floor Tile /Mastic	Brown/Gray/Green Non-Fibrous		25% Quartz 75% Non-fibrous (Other)	None Detected
021805232-0042 C13-2-Mastic	12x12 Green Floor Tile /Mastic	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0042A		Homogeneous			
C14-1 021805232-0043	Baseboard Mastic Only	Brown/White/Yellow Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
C14-2	Baseboard Mastic	Brown/White/Beige	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0044	Only	Non-Fibrous Homogeneous	-1 /0 Ochulose	100 % NOTHINIOUS (Other)	Holle Defected
C15-1	Quarry Tile Mortar Bed	Gray/White/Beige Non-Fibrous	<1% Cellulose 1% Synthetic	30% Quartz 69% Non-fibrous (Other)	None Detected

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe		<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
C15-2 021805232-0046	Quarry Tile Mortar Bed	Gray/White/Beige Fibrous Heterogeneous	1% Cellulose 1% Synthetic	30% Quartz 68% Non-fibrous (Other)	None Detected
	Cornet Adhasiva	-	3% Cellulose	OGO/ Non fibrage (Other)	<10/ Charactile
C16-1 021805232-0047	Carpet Adhesive	Black/Yellow/Beige Non-Fibrous Heterogeneous	1% Synthetic <1% Glass	96% Non-fibrous (Other)	<1% Chrysotile
			<1% Hair		
C16-2	Carpet Adhesive	Tan Non-Fibrous	1% Cellulose 1% Synthetic	98% Non-fibrous (Other)	None Detected
021805232-0048		Homogeneous			
C17-1	Black Expansion Joint Caulk	Brown/Gray Non-Fibrous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	None Detected
021805232-0049		Heterogeneous			
C17-2	Black Expansion Joint Caulk	Brown/Gray Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0050		Homogeneous			
C18-1	Baseboard Adhesive Only	Brown/Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0051		Heterogeneous			
C18-2	Baseboard Adhesive Only	Brown/Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
021805232-0052	DI 1 W 1	Homogeneous	40/ 0 :: :	200/ 11 - 51 - 12 - 13	.40/ 5' '''
C19-1	Black Waterproofing Material	Gray/Black/Yellow Non-Fibrous	1% Cellulose 3% Synthetic	96% Non-fibrous (Other)	<1% Chrysotile
021805232-0053	D. 1.14.1	Heterogeneous	.404 0 11 1	4000/ N 51 (OII )	N. D. ( )
C19-2 021805232-0054	Black Waterproofing Material	Brown/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
	12x12 OW Floor	-		25% Quartz	29/ Chrysotile
C20-1-Floor Tile	Tile/Mastic	Beige Non-Fibrous Homogeneous		72% Non-fibrous (Other)	3% Chrysotile
C20-1-Mastic	12x12 OW Floor	Black	2% Cellulose	90% Non-fibrous (Other)	8% Chrysotile
021805232-0055A	Tile/Mastic	Fibrous Homogeneous	270 301141333	oo /o (ton horodo (canol))	C/N GITTY GOLLING
C20-2	12x12 OW Floor	-			Positive Stop (Not Analyzed)
	Tile/Mastic				, , , , , , , , , , , , , , , , , , ,
021805232-0056					
C21-1-Brown Floor Tile	12x12 Brown Elevator Tiles	Brown/Gray/Black Non-Fibrous		10% Quartz 90% Non-fibrous (Other)	None Detected
021805232-0057	40:40 Pressure Floors	Homogeneous	440/ Oallistees	4000/ Nam Sharras (Other)	Mana Detected
C21-1-Mastic	12x12 Brown Elevator Tiles	White/Clear Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
C21-1-Tan Floor Tile	12x12 Brown Elevator	Tan/Beige		25% Quartz	None Detected
021-1-1an Floor Tile	Tiles	Non-Fibrous Homogeneous		75% Non-fibrous (Other)	none Detected
C21-1-Mastic 2	12x12 Brown Elevator	Black/Orange	2% Cellulose	94% Non-fibrous (Other)	2% Chrysotile
021-1-IVIASUC 2 021805232-0057C	Tiles	Fibrous Heterogeneous	2% Synthetic	04 /0 (NOT-IIDIOUS (OUICI)	270 Offiyootiic
C21-1-White Floor Tile	12x12 Brown Elevator	White/Beige Non-Fibrous		25% Quartz	None Detected
021805232-0057D	Tiles	Homogeneous		75% Non-fibrous (Other)	
C21-1-Mastic 3	12x12 Brown Elevator Tiles	Black Non-Fibrous	2% Cellulose	90% Non-fibrous (Other)	8% Chrysotile
021805232-0057E	11100	Homogeneous			
C21-2-Brown Floor Tile	12x12 Brown Elevator Tiles	Brown/Gray/Black Non-Fibrous		10% Quartz 90% Non-fibrous (Other)	None Detected
	11100	Homogeneous		00 /0 140H-HDIOU3 (OHIGI)	



 EMSL Order:
 021805232

 Customer ID:
 FMEC62

 Customer PO:
 E5924.000

Project ID:

### Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbe	estos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
C21-2-Mastic	12x12 Brown Elevator Tiles	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
C21-2-Tan Floor Tile	12x12 Brown Elevator Tiles	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C21-2-Mastic 2	12x12 Brown Elevator Tiles				Positive Stop (Not Analyzed)
021805232-0058C					
C21-2-White Floor Tile	12x12 Brown Elevator Tiles	White/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
C21-2-Mastic 3	12x12 Brown Elevator Tiles				Positive Stop (Not Analyzed)
021805232-0058E					

Analyst(s)

Nicole Shutts (34) Scott Combs (48) Stephen Bennett, Laboratory Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

# **Appendix J**

**Chain of Custody Forms** 



OrderID: 021805232



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC. 706 GRALIN ST. KERNERSVILLE, NC 27284

PHONE: (336) 992-1025 FAX: (336) 992-4175

Company Name : F&ME	Consultants		FMSI Custo	omer ID: FME62			
Street: 3112 Devine Street			City: Colun		State/Provin	rce: SC	
Zip/Postal Code: 29205	GL	Country: USA	Telephone #: 803-254-4540 Fax #: 803-254-4542				
Report To (Name): Glyn	n Ellen	Country. COA	Please Provide Results:  Fax  Email				
Email Address: gellen@			riease riov	ide Results.	Tax 🖂 Lilian		
mmincey@fmecol.com,t		l.com	Purchase O	rder: E5924.000			
Project Name/Number:		one Flooring		ct ID (Internal Us			
U.S. State Samples Take		ill to: ⊠ Same ☐ Different -				dential/Tax Exempt	
	EWISE-B	Third Party Billing requires wri			Comments		
		Turnaround Time (TAT				15	
	Hour [	24 Hour 48 Hour and to schedule. *There is a premiu	m charge for 3 Ho			will be asked to sign an	
authorization form	for this service.	Analysis completed in accordance	with EMSL's Ten	ms and Conditions lo	ocated in the Analytical	Price Guide.	
PCM - Air ☐ Check if sail from NY	mples are	TEM – Air ☐ 4-4.5hr TAT	(AHERA only)	TEM- Dust			
☐ NIOSH 7400		☐ AHERA 40 CFR, Part 76	63	☐ Microvac -	ASTM D 5755		
☐ w/ OSHA 8hr. TWA		☐ NIOSH 7402		☐ Wipe - AST	M D6480		
PLM - Bulk (reporting lin	nit)	☐ EPA Level II		☐ Carpet Son	ication (EPA 600/J-	93/167)	
☑ PLM EPA 600/R-93/11	6 (<1%)	☐ ISO 10312		Soil/Rock/Ver	miculite		
☐ PLM EPA NOB (<1%)		TEM - Bulk			00/R-93/116 with m	0	
Point Count	(-0.40/)	☐ TEM EPA NOB	-LI- NDO			nilling prep (<0.25%)	
☐ 400 (<0.25%) ☐ 1000 Point Count w/Gravimetric		☐ NYS NOB 198.4 (non-fria ☐ Chatfield SOP	able-NY)		TEM Cyclitative via Filtestica Prop		
☐ 400 (<0.25%) ☐ 1000					☐ TEM Qualitative via Filtration Prep ☐ TEM Qualitative via Drop Mount Prep		
☐ NYS 198.1 (friable in I		TEM - Water: EPA 100.2		☐ Cincinnati N	Method EPA 600/R-0		
☐ NYS 198.6 NOB (non-	P. Carlotte and P. Carlotte an		☐ Drinking	(BC only) Other:			
☐ NYS 198.8 SOF-V	mable ivi)						
☐ NIOSH 9002 (<1%)		All Fiber Sizes  Waste	☐ Drinking				
☐ Check For Positive St	top – Clearly	Identify Homogenous Grou	p Filter	Pore Size (Air S	amples): 🔲 0.8µ	ım □ 0.45µm	
Samplers Name: Mike M	incey		Samplers	Signature:			
		6.030		V	olume/Area (Air)	Date/Time	
Sample #		Sample Descript	ion		HA # (Bulk)	Sampled	
C 1-1A thru C1-3A	12"x12" O	W w/ Brown &Teal Floor Tile	/Mastic				
C1-1B thru C1-3B	12"x12" O\	W w/ Brown &Teal Floor Tile	/Mastic				
C1-1C thru C1-3C	12"x12" O\	W w/ Brown &Teal Floor Tile	/Mastic				
C2-1A thru C2-3A	12"x12" Br	own Floor Tile/ Mastic					
C2-1B thru C2-3B	12"x12" Br	own Floor Tile/ Mastic				58/	
Client Sample # (s):	C1-1A th	nru C21-3 -		Tot	al # of Samples:	# 87	
Relinquished (Client):		Date	: , 7	/26/2018	Time:	13:00	
Received (Lab):	XX	Date	: 7/2	7/18	Time:	9:30	
Comments/Special Instr	uctions: TE			110	Time.	1.00	
			OFKV	79442	402495		
			-07	1000	100790		

OrderID: 021805232



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC. 706 GRALIN ST. KERNERSVILLE, NC 27284

PHONE: (336) 992-1025 FAX: (336) 992-4175

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
C2-1C thru C2-3C	12"x12" Brown Floor Tile/ Mastic		
C3-1A thru C3-3A	Carpet Adhesive		
C3-1B thru C3-3B	Carpet Adhesive		
C3-1C thru C3-3C	Carpet Adhesive		
C4-1A thru C4-3A	Baseboard Adhesive Only		
C4-1B thru C4-3B	Baseboard Adhesive Only		
C4-1C thru C4-3C	Baseboard Adhesive Only		
C5-1 thru C5-3	Rubber Stairway Tread Adhesive Only		
C6-1 thru C6-3	12"x12" Blue w/ White Streaks Floor Tile/ Mastic		
C7-1 thru C7-3	Green/While Roll Lineoleum Floor Tile/ Mastic		
C8-1 thru C8-3	12"x12" Black Floor Tile		
C9-1 thru C9-3	18"x18" Brown/Tan Floor Tile/ Mastic 12"x12" White Floor Tile/ Mastic		
C10-1 thru C10-3	under Black Floor Tiles (17th Floor Bathrooms)		Yes Ise
C11-1 thru C11-3	12"x12" OW/ Tan Floor Tiles/ Mastic		
C12-1 thru C12-3	12"x12" Tan Floor Tile/ Mastic		
C13-1 thru C13-3	12"x12" Green Floor Tile/ Mastic		
C14-1 thru C14-3	Baseboard Mastic Only		
C15-1 thru C15-3	Quarry Tile Mortar Bed		
C16-1 thru C16-3	Carpet Adhesive		
C17-1 thru C17-3	Black Expansion Joint Caulk		
C18-1 thru C18-3	Baseboard Ahesive Only		
C19-1 thru C19-3	Black Waterproofing Material		
*Comments/Special	12"x12" OW Floor Tile/ Mastic		

OrderID: 021805232



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC. 706 GRALIN ST. KERNERSVILLE, NC 27284

PHONE: (336) 992-1025 FAX: (336) 992-4175

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
-21-1 thru C21-3	12"x12" Brown Elevator Tiles		
			3,91
	The state of the s	4-14	
		Value of the Control	
		1 20 2 40 10 10	
N. Sk. Tri			
	The state of the s	10 93300	178
		Ser Senting	Selection .
			1-14-1-1-1
			74
		3	111/2
		3 3 3 3 3 3	
1943			
March 1			
*Comments/Special I	nstructions:		

Page 3 of \_\_\_\_ pages

# **Appendix K**

### **Personnel Certifications**



### SCDHEC ISSUED

Asbestos ID Card

### Glynn M Ellen



SUPERAHERA SA-00455 01/30/19 CONSULTPD PD-00098 06/09/18 CONSULTMP ASB-22641 01/29/19 AIRSAMPLER AS-00079 01/30/19

This card is nontransferable and invalid if loaned or given to another person for identification. This card will also be invalid if altered or defaced. This card is property of SCDHEC. It must be returned to the department if the holder's accreditation is revoked or if this card is invalidated. Any person performing regulated asbestos activities without current accreditation shall be subject to legal sanction. This card must be returned upon expiration and/or issuance of a new card.

YOU MUST HAVE THIS IDENTIFICATION CARD WITH YOU ON THE JOB

For information of corrections contact: SCI

SCDHEC – Asbestos Section

2600 Bull Street Columbia, SC 29201 (803) 898-4289

### SCDHEC ISSUED

Asbestos ID Card

### Michael Mincey



SUPERAHERA SA-01424 CONSULTMP AIRSAMPLER

MP-00161 AS-00272

Expiration Date: 01/30/19 01/29/19 01/30/19

This card is nontransferable and \_\_\_\_\_ invalid if loaned or given to another person for identification. This card will also be invalid if altered or defaced. This card is property of SCDHEC. It must be returned to the department if the holder's accreditation is revoked or if this card is invalidated. Any person performing regulated asbestos activities without current accreditation shall be subject to legal sanction. This card must be returned upon expiration and/or issuance of a new card.

YOU MUST HAVE THIS IDENTIFICATION CARD WITH YOU ON THE JOB.

For information of corrections contact:

SCDHEC - Asbestos Section 2600 Bull Street

Columbia, SC 29201 (803) 898-4289

# **Appendix L**

**Regulatory Summary** 



### **Asbestos Regulatory Information**

#### **Renovations & Demolitions**

#### **Definitions**

**Renovation** means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing materials (RACM) from a facility component. "Remodeling" is considered renovation.

**Demolition** is wrecking or taking out any load-supporting structural member of a facility together and any related handling operations. Structural burns are prohibited by State Open Burning Regulations.

### **Applicability**

Renovation and demolition of most facilities (including buildings, structures, and other installations), are subject to State and Federal asbestos regulations. Certain residential buildings may be exempt. Contact the SCDHEC Asbestos Section for additional information.

All asbestos-containing materials must be removed from a facility prior to demolition. Only the following asbestos-containing materials (ACM) may be left in place during demolition:

- ACM on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition
- RACM that was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, cannot be safely removed. If not removed for safety reasons, all exposed RACM and any asbestos-contaminated debris must be treated as regulated asbestos-containing waste material. Category I and Category II non-friable mastic, glue, and adhesive ACM that is not friable or in poor condition, and where the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition operations.
- Category I and Category II non-friable mastic, glue, and adhesive ACM that is not friable
  or in poor condition, and where the probability is low that the materials will become
  crumbled, pulverized, or reduced to powder during demolition operations.

The facility owner and the renovation or demolition contractor are both responsible for ensuring compliance with these regulations.

### **Building Inspections**

Before a facility or a portion of a facility is renovated or demolished, the owner/operator of the facility or renovation or demolition activity must ensure that the facility or portion of the facility being renovated or demolished has been thoroughly inspected for the presence of asbestos. The inspection must be performed by a person who has been trained and licensed as an Asbestos Building Inspector or management planner in accordance with State training and licensing requirements.

The inspector must identify, quantify, and assess the condition of all suspect asbestos-containing material, either friable or non-friable, on interior and exterior portions of the facility. The inspector must also comply with the procedures specified in Regulation 61-86.1 VI D. In addition, the inspector is required to prepare a written report detailing the findings of the inspection. At a minimum, the report must include information required in Regulation 61-86.1 VI C. A legible copy of the building inspection report must be provided to the Department prior to each demolition, and upon request for renovations. (Note: "BUILDING INSPECTIONS "can be consulted for a detailed explanation of the aforementioned sampling and reporting protocols.)

A building inspection will only be acceptable if performed **within three years** prior to the demolition or renovation. If an inspection report is more than three years old, then it must be confirmed and verified by a licensed Asbestos Building Inspector or Management Planner.

### **Friable Asbestos Containing Materials**

If friable asbestos-containing materials (e.g., pipe insulation) are present, they must be removed prior to being disturbed during renovation or demolition activities. Removal (abatement) must be performed by trained, licensed persons using procedures detailed in State and Federal regulations.

A project design must be prepared for each asbestos abatement project involving the abatement of greater than 3,000 square feet, 1,500 linear feet and/or 656 cubic feet of RACM in a facility to be reoccupied. Such designs must be prepared by a person licensed by DHEC as an Asbestos Project Designer.

### **Non-Friable Asbestos Containing Materials**

Please note that when it can reasonably be expected that non-friable materials will become friable during removal, that these materials must be considered friable from the beginning. If non-friable Asbestos Containing Materials (ACM) becomes friable during an abatement project, the removal becomes subject to the same requirements as friable materials, including training, licensing, notification, and work practices.

- Material should always be lowered to the ground carefully. Throwing or dropping non-friable ACM to the ground or into a truck will cause the material to become friable.
- Materials should be kept wet or misted with water during removal to minimize potential fiber release. **NOTE: The use of water is only a control measure and by no means prevents a material from becoming friable.**
- Once removed, materials may be placed in 6-mil polyethylene bags or drums or wrapped with 6-mil polyethylene sheeting. Additional water may be added to ensure thorough wetting, but do not add so much that the bag or wrapping breaks when lifted.
- Debris already on the ground should be wet and either collected manually or gathered with a shovel and bagged for disposal. These materials can be potential sources of airborne asbestos fiber releases.
- South Carolina Regulation 61-86.1 requires that containers (bags, drums, wrapped components) holding asbestos waste must be labeled with the following: **DANGER** -

## CONTAINS ASBESTOS FIBERS - AVOID CREATING DUST - CANCER AND LUNG DISEASE HAZARD.

- Materials should be taken to a landfill as soon as possible but may be stored temporarily
  in a <u>secure</u> area subject to Departmental approval. Transport the materials so as to
  prevent them from leaking, spilling, or blowing off the vehicle.
- You should contact the landfill directly to make sure it will accept the material. You must obtain written approval from DHEC in advance for the disposal. You can get this approval by writing to the following address:

South Carolina Department of Health and Environmental Control Attn: Bureau of Air Quality/Asbestos Section 2600 Bull Street Columbia, SC 29201

Be sure to include the following:

- 1. the address where the material is to be removed;
- 2. a brief description of the content (cement-like tiles, asphaltic shingles, etc.);
- 3. the volume of waste in cubic yards or the area in square feet of material removed, and;
- 4. the name and location of the landfill which has agreed to accept the waste.

Please remember to include your name, return address, and phone number.

 DO NOT BURN OR RECYCLE any asbestos-containing or asbestos-contaminated materials.

The Occupational Safety and Health Administration (OSHA) has rules for workers affected by asbestos-containing materials. These rules must be complied with by all contractors and facility owners and include specific work practices, respiratory protection, and asbestos training requirements, **even for activities involving only non-friable asbestos-containing materials.** Contact the Department of Labor at (803) 896-7665 for details.

#### **Notification of Renovations & Demolitions**

Prior to removing regulated asbestos-containing materials, <u>written notification</u> must be submitted to DHEC (up to 10 working days in advance, depending on the amount of asbestos to be removed). The notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. Required fees must be submitted along with the notification. You must obtain a permit from the Department prior to the renovation activity.

Prior to the demolition of any regulated facility, <u>written notification</u> must be submitted to DHEC at least 10 working days in advance **even if a building inspector determines that asbestos is not present at the facility.** The notification must include certain required items of information about the owner, the contractor, the facility, and the demolition project. Required fees and a copy of the building inspector's report must be submitted along with the notification of demolition. You must obtain a permit from the Department prior to the demolition activity.

### **Disposal**

### Never burn any asbestos-containing waste material.

Non-asbestos-containing demolition debris and debris which contains only non-regulated roofing or flooring may be disposed of at a DHEC-approved disposal site for cellulosic or inert waste. Waste consolidation activities involving grinding, cutting, or compacting of non-friable asbestos-containing materials will subject these materials to more stringent State and Federal asbestos disposal regulations.

Regulated asbestos waste must be handled by properly licensed asbestos abatement personnel and disposed of at a landfill permitted to accept regulated asbestos waste. A list of approved landfills may be obtained from the Asbestos Section.

### **Building Inspection Report Directions**

As required by the National Emission Standard for Hazardous Air Pollutants (NESHAP) and Regulation 61-86.1, an owner/operator shall ensure that a building inspection, to detect the presence of asbestos-containing material (ACM), has been performed prior to any renovation or demolition activity at a regulated facility.

Under Regulation 61-86.1, Section VI.A.6., an inspection cannot have been performed more than three years prior to a renovation or demolition activity. If more than three years have elapsed since the most recent inspection, the previous inspection shall be confirmed and verified by a licensed building inspector and/or management planner.

Regulation 61-86.1 requires that all inspections be performed by persons trained and licensed as either a building inspector and/or management planner. In order to be licensed in these disciplines, persons must have successfully completed a DHEC approved initial training course specific to inspecting for ACM in a building and/or a course specific to management planning for ACM in a building. Persons must also have taken and passed an examination at the end of the course with a score of 70 percent or above.

In performing inspections, Regulation 61-86.1 requires that a building inspector and/or management planner comply with the requirements of Section VI, Asbestos Building Inspection Requirements. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

In performing inspections, Regulation 61-86.1 requires that a building inspector and/or management planner follow specific sampling procedures. According to Section IV.B.3.a of the regulation, a building inspector and/or management planner shall comply with the procedures specified in **40 CFR 763.86** in determining sampling locations and the number of representative samples to be collected. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

Under 40 CFR Part 763.86, suspect ACM are divided into three categories: surfacing materials, thermal system insulation (commonly referred to as TSI), and miscellaneous materials.

Regulation 61-86.1, Section VI contains sampling procedures specific to each category of material.

<u>Surfacing material</u> includes, but is not limited to, joint compound, plaster, and painted, troweled on, or spray-applied textured material. To remain in compliance with Regulation 61-86.1, surfacing materials on exterior and interior portions of a facility shall be sampled according to procedures outlined in Regulation 61-86.1, Section VI.D.1. (a)-(c):

- A licensed asbestos inspector shall collect, in a statistically random manner, a minimum of three bulk samples from each homogeneous area of any surfacing that is not assumed to be ACM, and shall collect the samples as follows:
  - o At least three bulk samples shall be collected from each homogeneous area that is 1,000 or fewer square feet (sf) or linear feet (Lf) in size.
  - o At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 but fewer than or equal to 5,000 sf or Lf.
  - o At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 sf or Lf.

**Thermal System Insulation (TSI)** is any material that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other facility components for the purpose of preventing heat loss or gain, water condensation, or for other purposes. **Miscellaneous Material** is any material that is not considered a surfacing material or thermal system insulation and includes, but is not limited to, flooring, roofing, mastics, gaskets, cementitious materials, caulkings, ceiling tiles, fire doors, wall boards, and flexible duct connections. To remain in compliance with Regulation 61-86.1, TSI and miscellaneous materials on exterior and interior portions of a facility shall be sampled in accordance with procedures outlined in Regulation 61-86.1, Section VI.D.2:

- A licensed asbestos inspector shall collect, in a statistically random manner, at least three bulk samples from each homogeneous area of TSI and any miscellaneous material that is not assumed to be ACM.
- In accordance with ASTM E2356, and any subsequent amendments and editions, negative results for non-friable organically bound material (NOB) shall be verified with at least one TEM analysis.
- NOBs include flooring, roofing, mastics, adhesives, caulks, and glazing.
- If an accredited inspector has determined the thermal system insulation to be fiberglass, foam glass, rubber, or other non-suspect material, then bulk samples are not required.

# Regulation 61-86.1, Section VI.C requires that a building inspector and/or management planner prepare a written asbestos building inspection report to include the following:

- A title page denoting:
  - 1. The client's name, company, address, and telephone number, and the name and exact location of the facility inspected;
  - 2. the date the inspection was performed;
  - 3. the date the inspection report was written; and
  - 4. the printed name and telephone number of the inspector(s), and his or her affiliated company name, address, and telephone number.

- A cover letter to the building owner or owner's representative that describes the purpose of the inspection; a general synopsis of the inspection and results; and the name, title, and signature of the inspector(s) and report writer, if different.
- A detailed narrative of the physical description of the building or part of the building affected by the renovation or demolition operation that includes:
  - 1. The square footage of the building or part of the building affected by the renovation or demolition operation;
  - 2. The building materials used in the construction of the exterior, roof, interior, and basement or crawlspace of the building affected by the demolition or affected by the renovation materials operation;
  - 3. An estimated or exact quantity (square or linear feet) for all suspect materials whether sampled for or assumed to be asbestos that may be affected by the renovation or demolition operation;
  - 4. Also include a description of non-suspect materials excluding: glass, metals, kiln brick, cement, fiberglass, concrete, pressed wood, cinder block, and rubber.
- An executive summary that details:
  - 1. The type of suspect ACM (e.g., TSI, floor tile, mastic), total square or linear footage, and the total number of samples collected for each separate homogenous area affected by the renovation or demolition operation;
  - 2. The date of the inspection, type, condition, quantity, sample results, and exact location of ACM positively identified or assumed to be ACM in the part of the building affected by the renovation or demolition operation;
  - 3. A list of the homogeneous areas identified;
  - 4. Whether the material is accessible for the building or part of the building affected by the renovation or demolition operation; and (5) The material's potential for disturbance for the building or part of the building affected by the renovation or demolition operation.
- For renovation and demolition operations, the inspector's determination that ACM is friable or non-friable.
- Except when suspect ACM materials are assumed to be asbestos, include a complete, clear, legible copy of all laboratory bulk sample results.
- Clear, legible drawings and/or photographs to clarify the scope of the renovation or demolition operation. Illustrate the exact location of each sample collected. For facilities that involve a trade secret or confidential component or an affected area process, a request for a variance may be submitted.
- The printed name and signature of each accredited inspector who collected the samples, and a clear legible copy of his or her DHEC issued asbestos building inspector or management planner license.

### **Things to Note:**

- At no time will negative assumptions about a suspect material's content be acceptable. There are only two acceptable options:
  - 1. Positive assumptions of suspect materials or
  - 2. Sampling of suspect materials per the procedures specified in 40 CFR 763.86
- A homogenous area is considered not to contain ACM only if the results of all samples required to be collected from the area are one percent or less.
- Bulk samples shall not be composited for analysis.

- In a multi-unit building, each separate room in each part of the building or areas affected by the renovation or demolition operation shall be inspected to confirm and quantify ACM homogeneous areas for sampling purposes.
- DHEC will not accept an asbestos building inspection or written report for any structure from an employee of an abatement company also involved in the removal of asbestoscontaining materials from that structure, unless the licensed inspector is an employee of an entity regulated under Regulation 61-86.1, Section XX, Industrial Manufacturing and Electrical Generation Facilities.
- An asbestos building inspector shall not participate in the analysis of the bulk samples he
  or she has collected.
- Destructive sampling techniques shall be utilized.
- Material Safety Data Sheets (MSDS), statements from the manufacturer, and architecture signoff will not be accepted as proof that a building product contains no asbestos, except in cases where the owner can verify the direct correlation of the building product to the MSDS, statements from the manufacturer, and/or architecture signoff documents. DHEC reserves the right to reject documentation that it deems unacceptable.

## **Appendix M**

**Abatement Project Forms** 





### ASBESTOS ABATEMENT PROJECT LICENSE APPLICATION

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: ☐ Standard Removal ☐ Emergency Removal ☐ Enclosure ☐ Encapsulation ☐ Cleanup ☐ Disposal

FOR OFFICE USE Postmark/Received:	Original □ / Revised □ / Cancellation □ (check one)	Project License I.D. (For Re	visions/Cancellations):
I. FACILITY OWNER:			
MAILING ADDRESS:			
CITY:	STATE:	ZIP:	
CONTACT PERSON:		PHONE: (	)
CITY:	STATE:	ZIP:	
CONTACT PERSON:		PHONE: (	)
E-MAIL ADDRESS:		E-MAIL PERMIT 🗆	OR MAIL PERMIT 🗆
FEDERAL I.D. NUMBER:			
DHEC CONTRACTOR LICENSE NO. (If applicable	e): EXPIRATIO	N DATE:	
III. FACILITY NAME:			
STREET ADDRESS:			
CITY:	STATE:	COUNTY:	
SITE (ROOM, FLOOR, WING, UNIT, MACHINE, E	TC.):		
BUILDING SIZE:	NO. OF FLOORS:	AGE IN YEARS: ———	
PRESENT USE:	PRIOR USE:	FUTURE USE:	
IV. PROCEDURES, INCLUDING ANALYTICAL ME	ETHOD IF APPROPRIATE, USED TO DETECT THE	PRESENCE OF ASBESTOS	MATERIAL:
FACILITY OR FACILITY COMPONENT SURVEYE	D BY (INSPECTOR NAME):		
COMPANY:		PHONE: ()	
DHEC LICENSE NUMBER:		EXPIRATION DATE:	
V. PROJECT DESIGN PERFORMED BY (IF APPL	ICABLE):		
COMPANY:		PHONE: ()	
DHEC LICENSE NUMBER: EXPIRATION DATE:			
VI. ASBESTOS-CONTAINING MATERIALS (ACM	TO BE REMOVED ONLY:		
TYPE (TSI, SURFACING, FLOORING, ROOFING, ETC.)	AMOUNT (SQUARE FEET, LINEAR FEET,	CUBIC FEET) CON	DITION (CIRCLE ONE)
		□ FRI	ABLE   NON-FRIABLE
		□ FRI	ABLE   NON-FRIABLE
		□ FRI	ABLE   NON-FRIABLE
		□ FRI	ABLE   NON-FRIABLE
VII. SCHEDULED DATES OF REMOVAL: START	DATE: COMPLETION	ON DATE:	
WORK DAYS: WORK HOURS:			
APPLICATIONS MUST BE SUBMITTED WITH FEES FEE SCHEDULE FOR FRIABLE ASBESTOS-CONTAINING  PRIOR TO THE SCHEDULED START DATE AS EQUIONS.  MATERIALS.			
PRIOR TO THE SCHEDULED START DATE AS FOLLOWS: MATERIALS:  NESHAP PROJECTS: 10 WORKING DAYS 10 CENTS PER SQUARE FOOT OR LINEAR FOOT			
MALL PROJECTS: 4 WORKING DAYS MINIMUM FEE OF \$25.00			
MINOR PROJECTS: 2 WORKING DAYS MAXIMUM FEE OF \$1000.00			

For additional information concerning regulatory requirements call or visit our Web site at http://www.scdhec.gov/environment/baq/asbestos.aspx

Non-Friable (NESAP-sized) Projects: 4 working days. No fee for non-friable ACM.

VIII. DESCRIPTION OF PLANNED ABATEMENT WORK & METH	HOD(S) TO BE USED:			
IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTR	BOLS TO BE USED TO BE	DEVIENT EMISSIONS OF ASDESTOS A	T THE DENOVATION SITE:	
IA. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTI	ROLS TO BE USED TO PR	REVENT EMISSIONS OF ASBESTOS A	THE RENOVATION SITE.	
X. WASTE TRANSPORTER #1:				
MAILING ADDRESS:				
CITY:				
CONTACT PERSON:				
CONTACTT ENGON.		THORE. (		
WASTE TRANSPORTER #2:				
MAILING ADDRESS:				
CITY:				
CONTACT PERSON:				
CONTACT I ENGON.		THORE.	)	
XI. WASTE DISPOSAL SITE:				
MAILING ADDRESS:				
CITY:	STATE:	ZIP:		
CONTACT PERSON:				
TEMPORARY ASBESTOS STORAGE CONTAINMENT AREA LIC				
XII. DESCRIPTION OF EMERGENCY REMOVAL (PLEASE ATTACK				
DATE & HOUR OF EMERGENCY (MM/DD/YY):				
DESCRIPTION OF SUDDEN, UNEXPECTED EVENT:				
DEGOTAL FIGURES CODDEN, CHEM 20125 EVENT.				
EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS AN	ND/OB WOLLD CALISE FOL	IIDMENT DAMACE AND/OD AN LINDEASC	NADI E EINANCIAL DUDDEN:	
EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS AN	ND/OR WOULD CAUSE EQU	IFMENT DAMAGE AND/OR AN UNREASC	DNABLE FINANCIAL BURDEN.	
VIII DESCRIPTION OF PROCEDURES TO BE FOULOWED IN T		DECTED ACRECTOR IS FOLIND OR	DDEVIOUSLY NON EDIA	
XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIA-BLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED OR REDUCED TO POWDER:				
VIV LOCDTICY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS O		ADT 64 CURRART MANUEL RE ON CITE	NUDING THE REMOVATION	
XIV. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS O AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPL				
HOURS.				
(SIGNATURE OF OWNER/OPERATOR)		(DATE)		
XIV. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.				
		/		
(SIGNATURE OF OWNER/OPERATOR)		(DATE)		



### **DEMOLITION LICENSE APPLICATION**

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: ☐ Total Demolition ☐ Partial Demolition ☐ Ordered Demolition

FOR OFFICE USE  Postmark/Received:	Original/Revis	ed/Cancellation (circle one)	Project License I.D. (For Revisions/Cancellations):
I. FACILITY OWNER:			
MAILING ADDRESS:			
CITY:		STATE:	ZIP:
CONTACT PERSON:			PHONE: ()
II. IS ASBESTOS PRESENT IN THE FACILITY?:			
III. DEMOLITION CONTRACTOR:			_ FEDERAL ID NO.:
MAILING ADDRESS:			
CITY:		STATE:	ZIP:
CONTACT PERSON:			PHONE: ()
E-MAIL ADDRESS:			E-MAIL PERMIT □ OR MAIL PERMIT □
FEDERAL I.D. NUMBER:			
ASBESTOS REMOVAL CONTRACTOR (If applicab	le):		
MAILING ADDRESS:			
CITY:		STATE:	ZIP:
CONTACT PERSON:			PHONE: ()
IV. FACILITY NAME:			
STREET ADDRESS:			
CITY:	;	STATE:	COUNTY:
SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ET	C.):		
BUILDING SIZE:N	NO. OF FLOORS: _		AGE IN YEARS:
PRESENT USE:F	PRIOR USE:		_ FUTURE USE:
V. PROCEDURES, INCLUDING ANALYTICAL MET	HOD IF APPROPR	IATE, USED TO DETECT THI	PRESENCE OF ASBESTOS MATERIAL:
FACILITY OR FACILITY COMPONENT SURVEYED	BY (INSPECTOR	NAME):	
COMPANY:			PHONE: ()
DHEC LICENSE NUMBER:			EXPIRATION DATE:
VI. NON-FRIABLE MASTIC, GLUE, AND ADHESIV	E ASBESTOS-CON	TAINING MATERIALS <b>REMA</b>	INING IN PLACE DURING DEMOLITION (IF APPLICABLE):
TYPE (MASTIC, GLUE, AND AD	HESIVE)	A	MOUNT (SQUARE FEET)
VII. SCHEDULED DATES OF DEMOLITION (YOU	MUST SPECIFY DA	TES):	
START DATE:         COMPLETION DATE:			TION DATE:
WORK DAYS:		WORK H	OURS:
Applications must be mailed along with	a \$50.00 foo (no)	vable to SCDUEC) at leas	t 10 working days prior to the schoduled

- Applications must be mailed along with a \$50.00 fee (payable to SCDHEC) at least 10 working days prior to the scheduled start date. Faxes will not be accepted.
- · A copy of an asbestos survey report (no older than 3 years) must accompany the application.

For additional information concerning regulatory requirements call or visit our Web site at http://www.scdhec.gov/environment/baq/asbestos.aspx

VIII. DESCRIPTION OF  □ BULLDOZER	PLANNED DEMOLITION N	METHOD(S) TO BE USED:  □ WRECKING BALL	□ MANUAL	□ BURNING	☐ IMPLOSION/EXPLOSION
IF OTHER PLEASE DES	_	LI WRECKING BALL	LI WANGAL	LI BURNING	LI INIPLOSION/EXPLOSION
IV DECODIDITION OF W		EEDING CONTROL C TO BE	LICED TO DDEVENT	TAILCUONG OF ACRE	CTOC AT THE DEMONITION CITE.
IX. DESCRIPTION OF WO	JRK PRACTICES & ENGINE	EERING CONTROLS TO BE	USED TO PREVENTE	EMISSIONS OF ASBES	STOS AT THE DEMOLITION SITE:
V MARTE TRANSPORT					
		CTATE			ZIP:
CONTACT PERSON:					()
WASTE TRANSPORTER					
MAILING ADDRESS:					
				Z	ZIP:
					()
					·
					ZIP:
CONTACT PERSON:				_ PHONE:	()
XII. IF DEMOLITION OR	DERED BY GOVERNMENT	T AGENCY, PLEASE IDENT	TIFY THE AGENCY BE	ELOW: (PLEASE ATTA	ACH A COPY OF THE ORDER)
NAME:			TITLE:		
AUTHORITY:					
DATE OF ORDER (MM/D	)D/YY):	DATE O	RDERED TO BEGIN(	MM/DD/YY):	
XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRI- ABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:					
ABLE ASBESTOS MATE	RIAL BECOIVES CROIVIBL	.ED, POLVERIZED, OR REL	DOCED TO FOWDER	-	
NO. 4 0555757 T. 445 44			0.111.1710.1./		
THE DEMOLITION INVO	LVING RACM AND EVIDE	NCE THAT THE REQUIRE			M) WILL BE ON-SITE DURING BY THIS PERSON WILL BE
AVAILABLE FOR INSPE	CTION DURING NORMAL	BUSINESS HOURS.			
(CICA	NATURE OF OWNER/OPERAT	TOP)		//	
	E ABOVE INFORMATION I	,		(DATE)	
		-			
(SIGN	NATURE OF OWNER/OPERAT	TOR)		//	
			SCDHEC) at least	,	prior to the scheduled

- Applications must be mailed along with a \$50.00 fee (payable to SCDHEC) at least 10 working days prior to the scheduled start date. Faxes will not be accepted.
- A copy of an asbestos survey report (no older than 3 years) must accompany the application.

For additional information concerning regulatory requirements call or visit our Web site at http://www.scdhec.gov/environment/baq/asbestos.aspx



### **Asbestos Waste Shipment Record**

1.	SCDHEC ASBESTOS ABATEMENT PROJECT LICENSE:						
Gei	nerator Information						
2.	Waste Generator/Owner Name & Address:	Work	Vork Site Name & Physical Address:		Waste Generator/Owner Telephone Number ( )		
3.	3. Abatement Contractor Name & Address:			Abatement Contractor Telephone Number ( )			
4.	Name of waste disposal site (WDS), mailing addr physical site location:	ess, ar	nd	WDS Te	lephone Number:		
5.	Description of Waste Materials (please circle): Friable (Regulated) / Nonfriable (Nonregulated)		6. Bags of Containers:  No. Type Drums  Bags Bulk Load	7. Total m3	Quantity: (yd3)		
8.	Special handling instructions & additional informat	ion:					
9.	Generator's/Contractor's Certification: I hereby de by proper shipping name and are classified, pack transport by highway according to applicable inter-	ed, ma	rked and labeled. The contents are in all				
	Print Name:		Signature:		Date:		
Tra	Transporter Information (Acknowledgment of Receipt of Materials):						
10.	Name, title, address, telephone number:		Signature:		Date:		
11.	Name, title, address, telephone number:		Signature:		Date:		
Dis	posal Site Operator						
12.	Discrepancy:		Bags or Containers	Total Qu	<u>iantity</u>		
13.	13. Waste Disposal Site Owner or Operator certification of receipt of asbestos materials covered by this manifest except as noted in item 11.						
	Print Name:		Signature:		Date:		

Please forward a completed copy of this record to: SCDHEC, Bureau of Air Quality, Asbestos Section, 2600 Bull Street, Columbia, SC 29201 (803) 898-4389 office. (803) 898-4281 fax.