CHP RESEARCH BUILDING
EMERGENCY POWER/FIRE PUMP
SYSTEM UPGRADE

H51-N345-JM
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PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade

PROJECT NUMBER: H51-N345-JM

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ELECTRICAL ENGINEER:

GWA, Inc.
F. Tripp Player, PE
P.E. #25122
Division 26 Electrical

STRUCTURAL ENGINEER:

ADC Engineering, Inc.
Christopher J. Gilger, PE
P.E. #28196
Division 05 Structural
IN Invitation for Construction Services

PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade
PROJECT NUMBER: H51-N345-JM
PROJECT LOCATION: Charleston, SC

BID SECURITY REQUIRED? Yes ☒ No ☐ NOTE: Contractor may be subject to a performance appraisal at the close of the project.
PERFORMANCE BOND REQUIRED? Yes ☒ No ☐
PAYMENT BOND REQUIRED? Yes ☒ No ☐ CONSTRUCTION COST RANGE: $275,000-325,000

DESCRIPTION OF PROJECT: Provide for replacement of the existing emergency generator on the roof along with electrical circuiting and re-working fuel oil connection. Provide & install plantform, structural support, and limited roof work. Re-work fuel oil connection Demolition of existing generator and associated electrical equipment/circuits.

BIDDING DOCUMENTS/PLANS MAY BE OBTAINED FROM:
http://academicdepartments.musc.edu/vpfa/candl/construction_projects/index.html

PLAN DEPOSIT AMOUNT: $ IS DEPOSIT REFUNDABLE Yes ☐ No ☒ N/A ☒

Bidders must obtain Bidding Documents/Plans from the above listed source(s) to be listed as an official plan holder. Only those Bidding Documents/Plans obtained from the above listed source(s) are official. Bidders that rely on copies of Bidding Documents/Plans obtained from any other source do so at their own risk. All written communications with official plan holders & bidders WILL ☒ NOT ☐ be via email or website posting.

IN ADDITION TO THE ABOVE OFFICIAL SOURCE(S), BIDDING DOCUMENTS/PLANS ARE ALSO AVAILABLE AT:

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

A/E NAME: GWA, Inc.
A/E CONTACT: Tripp Player
A/E ADDRESS: Street/PO Box: 168 Laurelhurst Avenue
City: Columbia State: SC ZIP: 29210-3824
EMAIL: gwa@uwinc.net
TELEPHONE: 803-252-6919 FAX: 803-799-5494

AGENCY: The Medical University of SC
AGENCY PROJECT COORDINATOR: James H. Stewart
ADDRESS: Street/PO Box: 97 Jonathan Lucas Street, Room 271
City: Charleston State: SC ZIP: 29425-0190
EMAIL: stewartjh@musc.edu
TELEPHONE: 843-792-3753 FAX: 843-792-0251

PRE-BID CONFERENCE: Yes ☒ No ☐ MANDATORY ATTENDANCE: Yes ☒ No ☐
PRE-BID DATE: 9/7/2016 TIME: 1:30 PM PLACE: Engineering & Facilities Conference Room 209
BID CLOSING DATE: 9/29/2016 TIME: 10:30 AM PLACE: Engineering & Facilities Conference Room 209

BID DELIVERY ADDRESSES:
HAND-DELIVERY:
Attn: James Stewart
Engineering & Facilities, 97 Jonathan Lucas Street
Charleston, SC 29425
MAIL SERVICE:
Attn: James Stewart
Engineering & Facilities, 97 Jonathan Lucas Street
Charleston, SC 29425

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

APPROVED BY: James H. Stewart (OSE Project Manager) DATE: 9-1-2016
Instructions to Bidders

for the following PROJECT:
(Name and location or address)
CHP Research Building Emergency Power/Fire Pump System Upgrade
College of Health Professions
141 Rutledge Avenue
Charleston, SC 29403

THE OWNER:
(Name, legal status and address)
Medical University of South Carolina
Engineering & Facilities / Administration
97 Jonathan Lucas Street PG 216B2 / MSC 190
Charleston, SC 29403

THE ARCHITECT:
(Name, legal status and address)
GWA, Inc., Electrical Engineers
168 Laurelhurst Avenue
Columbia, SC 29210-3824

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ARTICLE 1  DEFINITIONS
§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, 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.

§ 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 and who meets the requirements set forth in the Bidding Documents.

§ 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 making a Bid represents that:
§ 2.1.1 The Bidder has read and understands the Bidding Documents or 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.

§ 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.

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

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 or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten 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 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 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.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

§ 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS
§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven days prior to the date for receipt of Bids.

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by 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.

§ 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.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. 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 four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 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.
ARTICLE 4  BIDDING PROCEDURES
§ 4.1 PREPARATION OF BIDS
§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

§ 4.1.4 Interlineations, alterations and erasures must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder’s refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 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. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent’s authority to bind the Bidder.

§ 4.2 BID SECURITY
§ 4.2.1 Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. 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. The amount of the bid security shall not be forfeited to the Owner in the event the Owner fails to comply with Section 6.2.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310, Bid Bond, unless otherwise provided in the Bidding Documents, 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.

§ 4.2.3 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 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 be addressed to the party receiving the Bids and 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, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 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.

§ 4.4 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 modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date- and time-stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 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
At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

§ 5.2 REJECTION OF BIDS
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.

§ 5.3 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 QUALIFICATION STATEMENT
Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request, a properly executed AIA Document A305, Contractor’s Qualification Statement, unless such a Statement has been previously required and submitted as a prerequisite to the issuance of Bidding Documents.

§ 6.2 OWNER’S FINANCIAL CAPABILITY
The Owner shall, at the request of the Bidder to whom award of a Contract is under consideration and no later than seven days prior to the expiration of the time for withdrawal of Bids, furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner’s obligations under the Contract. Unless such reasonable evidence is furnished, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 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.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.
§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder’s option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

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 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 If the Owner requires that bonds be secured from other than the Bidder’s usual sources, changes in cost will be adjusted as provided in the Contract Documents.

§ 7.2 TIME OF DELIVERY AND FORM OF BONDS
§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

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

§ 7.2.4 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, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.
Certification of Document’s Authenticity
AIA® Document D401™ – 2003

I, F. Drucilla Brookshire, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 13:40:12 on 06/30/2016 under Order No. 6472917183_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A701™ – 1997, Instructions to Bidders, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

(Signed)

Vice President

(Title)

30 June 2016

(Dated)
OSE FORM 00201

STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

AGENCY: Medical University of SC

PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade

PROJECT NUMBER: H51-N345-JM

PROJECT LOCATION: Charleston, SC

PROCUREMENT OFFICER: Jim McVey

1. STANDARD SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

1.1 These Standard Supplemental Instructions to Bidders amend or supplement Instructions to Bidders (AIA Document A701-1997) and other provisions of Bidding and Contract Documents as indicated below.

1.2 Compliance with these Standard Supplemental Instructions is required by the Office of State Engineer (OSE) for all State projects when competitive sealed bidding is used as the method of procurement.

1.3 All provisions of the A701-1997, which are not so amended or supplemented, remain in full force and effect.

1.4 Bidders are cautioned to carefully examine the Bidding and Contract Documents for additional instructions or requirements.

2. MODIFICATIONS TO A701-1997

2.1 Delete Section 1.1 and insert the following:

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 (A-701), Supplemental 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, 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 the AIA A101, 2007 Edition as modified by OSE Form 00501 – Standard Modification to Agreement between Owner and Contractor. Any reference in this document to the General Conditions of the Contract for Construction, AIA Document A201, or some abbreviated reference thereof, shall mean the AIA A201, 2007 Edition as modified by OSE Form 00811 – Standard Supplementary Conditions.

2.2 In Section 1.8, delete the words “and who meets the requirements set forth in the Bidding Documents”.

2.3 In Section 2.1, delete the word “making” and substitute the word “submitting.”

2.4 In Section 2.1.1:

After the words “Bidding Documents,” delete the word “or” and substitute the word “and.” Insert the following at the end of this section:

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.

2.5 In Section 2.1.3, insert the following after the term “Contract Documents” and before the period:

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.

2.6 Insert the following Sections 2.2 through 2.8:

2.2 CERTIFICATION OF INDEPENDENT PRICE DETERMINATION

GIVING FALSE, MISLEADING, OR INCOMPLETE INFORMATION ON THIS CERTIFICATION MAY RENDER YOU SUBJECT TO PROSECUTION UNDER SECTION 16-9-10 OF THE SOUTH CAROLINA CODE OF LAWS AND OTHER APPLICABLE LAWS.
A. By submitting an 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—
      a. Those prices;
      b. The intention to submit an bid; or
      c. The methods or factors used to calculate the prices offered.
   2. The prices in this bid have not been and will not be knowingly disclosed by the bidder, directly or indirectly, to any other bidder or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
   3. No attempt has been made or will be made by the bidder to induce any other concern to submit or not to submit a bid for the purpose of restricting competition.

B. Each signature on the bid is considered to be a certification by the signatory that the signatory—
   1. Is the person in the bidder’s organization responsible for determining the prices being offered in this bid, and that the signatory has not participated and will not participate in any action contrary to paragraphs A.1 through A.3 of this certification; or
   2. a. Has been authorized, in writing, to act as agent for the bidder's principals in certifying that those principals have not participated, and will not participate in any action contrary to paragraphs A.1 through A.3 of this certification [As used in this subdivision B.2.a, the term "principals" means the person(s) in the bidder’s organization responsible for determining the prices offered in this bid];
      b. As an authorized agent, does certify that the principals referenced in subdivision B.2.a of this certification have not participated, and will not participate, in any action contrary to paragraphs A.1 through A.3 of this certification; and
      c. As an agent, has not personally participated, and will not participate, in any action contrary to paragraphs A.1 through A.3 of this certification.

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

2.3 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.

2.4 CERTIFICATION REGARDING DEBAMENT AND OTHER RESPONSIBILITY MATTERS
A. 1. By submitting an Bid, Bidder certifies, to the best of its knowledge and belief, that-
   a. Bidder and/or any of its Principals-
      (i) Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any state or federal agency;
      (ii) 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
      (iii) Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph A.1.a.(ii) of this provision.
   b. Bidder has not, within a three-year period preceding this bid, had one or more contracts terminated for default by any public (Federal, state, or local) entity.
   2. "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).
B. Bidder shall provide immediate written notice to the Procurement Officer if, at any time prior to contract award, Bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
C. If Bidder is unable to certify the representations stated in paragraphs A.1, Bidder must submit a written explanation regarding its inability to make the certification. The certification will be considered in connection with a review of the Bidder's responsibility. Failure of the Bidder to furnish additional information as requested by the Procurement Officer may render the Bidder nonresponsible.
2.7 IRAN DIVESTMENT ACT CERTIFICATION

(a) The Iran Divestment Act List is a list published by the State Fiscal Accountability Authority pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: http://procurement.sc.gov/PS/PS-iran-divestment.phtm. Section 11-57-310 requires the government to provide a person ninety days written notice before he is included on the list. The following representation, which is required by Section 11-57-330(A), is a material inducement for the State to award a contract to you. (b) By signing your Offer, you certify that, as of the date you sign, you are not on the then-current version of the Iran Divestment Act List. (c) You must notify the Procurement Officer immediately if, at any time before posting of a final statement of award, you are added to the Iran Divestment Act List.

2.8 OPEN TRADE REPRESENTATION (JUN 2015)

By submitting an Offer, 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]

2.7 Delete Section 3.1.1 and substitute the following:

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 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.

2.8 Delete the language of Section 3.1.2 and insert the word “Reserved.”

2.9 In Section 3.1.4, delete the words “and Architect may make” and substitute the words “has made.”
2.10 Insert the following Section 3.1.5

3.1.5 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.

2.11 In Section 3.2.2:

Delete the words “and Sub-bidders”
Delete the word “seven” and substitute the word “ten”

2.12 In Section 3.2.3:

In the first Sentence, insert the word “written” before the word “Addendum.” Insert the following at the end of the section:

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.

2.13 Insert the following at the end of Section 3.3.1:

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.

2.14 Delete Section 3.3.2 and substitute the following:

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 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.

2.15 Delete Section 3.4.3 and substitute the following:

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.

2.16 Insert the following Sections 3.4.5 and 3.4.6:

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, 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.

2.17 In Section 4.1.1, delete the word “forms” and substitute the words “SE-330 Bid Form.”

2.18 Delete Section 4.1.2 and substitute the following:

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.

2.19 Delete Section 4.1.3 and substitute the following:

4.1.3 Sums shall be expressed in figures.
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2.20 Insert the following at the end of Section 4.1.4:
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.

2.21 Delete Section 4.1.5 and substitute the following:
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.

2.22 Delete Section 4.1.6 and substitute the following:
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.

2.23 Delete Section 4.1.7 and substitute the following:
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.

2.24 Delete Section 4.2.1 and substitute the following:
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.

2.25 Delete Section 4.2.2 and substitute the following:
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.

2.26 Delete Section 4.2.3 and substitute the following:
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.

2.27 Insert the following Section 4.2.4:
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.
2.28 Delete Section 4.3.1 and substitute the following:

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.

2.29 Insert the following Section 4.3.5:

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.

2.30 Delete Section 4.4.2 and substitute the following:

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.

2.31 In Section 5.1, delete everything following the caption “OPENING OF BIDS” and substitute the following:

5.1.1 Bids received on time will be publicly opened and will be read aloud. Owner will not read aloud Bids that Owner determines, at the time of opening, to be non-responsive.

5.1.2 At bid opening, Owner will announce the date and location of the posting of the Notice of Intended Award.

5.1.3 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 Owner determines to award the Project, 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, Owner will open and consider the Bid.

2.32 In Section 5.2, insert the section number “5.2.1” before the words of the “The Owner” at the beginning of the sentence.

2.33 Insert the following Sections 5.2.2 and 5.2.3:

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.
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2.34 Delete Section 6.1 and substitute the following:

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.

2.35 Delete the language of Section 6.2 and insert the word “Reserved.”

2.36 Delete the language of Sections 6.3.2, 6.3.3, and 6.3.4 and insert the word “Reserved” after each Section Number.

2.37 Insert the following Section 6.4

6.4 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]

2.38 Delete Section 7.1.2 and substitute the following:

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.

2.39 Delete the language of Section 7.1.3 and insert the word “Reserved.”

2.40 In Section 7.2, insert the words “CONTRACT, CERTIFICATES OF INSURANCE” into the caption after the word “Delivery.”

2.41 Delete Section 7.2.1 and substitute the following:

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 days thereafter. The Bidder shall deliver the required bonds and certificate of insurance to the Owner not later than three 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.

2.42 Delete the language of Section 7.2.2 and insert the word “Reserved.”

2.43 Delete the language of Article 8 and insert the following:

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on South Carolina Modified AIA Document A101, 2007, Standard Form of Agreement Between Owner and Contractor as modified by OSE Form 00501 – Standard Modification to Agreement Between Owner and Contractor.

2.44 Insert the following Article 9:

ARTICLE 9 MISCELLANEOUS

9.1 NONRESIDENT TAXPAYER REGISTRATION AFFIDAVIT INCOME TAX WITHHOLDING
IMPORTANT TAX NOTICE - NONRESIDENTS ONLY
Withholding Requirements for Payments to Nonresidents: Section 12-8-550 of the South Carolina Code of Laws requires persons hiring or contracting with a nonresident conducting a business or performing personal services of a temporary nature within South Carolina to withhold 2% of each payment made to the nonresident. The withholding requirement does not apply to (1) payments on purchase orders for tangible personal property when the payments are not accompanied by services to be performed in South Carolina, (2) nonresidents who are not conducting business in South Carolina, (3) nonresidents for contracts that do not exceed $10,000 in a calendar year, or (4) payments to a nonresident who (a) registers with either the S.C. Department of Revenue or the S.C. Secretary of State and (b) submits a Nonresident Taxpayer Registration Affidavit - Income Tax Withholding, Form I-312 to the person letting the contract.
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For information about other withholding requirements (e.g., employee withholding), contact the Withholding Section at the South Carolina Department of Revenue at 803-898-5383 or visit the Department's website at: www.sctax.org

This notice is for informational purposes only. This Owner does not administer and has no authority over tax issues. All registration questions should be directed to the License and Registration Section at 803-898-5872 or to the South Carolina Department of Revenue, Registration Unit, Columbia, 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
For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "CONFIDENTIAL" every page, or portion thereof, that Bidder contends contains information that is exempt from public disclosure because it is either (a) a trade secret as defined in Section 30-4-40(a)(1), or (b) privileged & confidential, as that phrase is used in Section 11-35-410. For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the words "TRADE SECRET" every page, or portion thereof, that Bidder contends contains a trade secret as that term is defined by Section 39-8-20 of the Trade Secrets Act. For every document Bidder submits in response to or with regard to this solicitation or request, Bidder must separately mark with the word "PROTECTED" every page, or portion thereof, that Bidder contends is protected by Section 11-35-1810. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark your entire bid as confidential, trade secret, or protected! If your bid, or any part thereof, is improperly marked as confidential or trade secret or protected, the State may, in its sole discretion, determine it nonresponsive. If only portions of a page are subject to some protection, do not mark the entire page. By submitting a response to this solicitation, Bidder (1) agrees to the public disclosure of every page of every document regarding this solicitation or request that was submitted at any time prior to entering into a contract (including, but not limited to, documents contained in a response, documents submitted to clarify a response, & documents submitted during negotiations), unless the page is conspicuously marked "TRADE SECRET" or "CONFIDENTIAL" or "PROTECTED", (2) agrees that any information not marked, as required by these bidding instructions, as a "Trade Secret" is not a trade secret as defined by the Trade Secrets Act, & (3) agrees that, notwithstanding any claims or markings otherwise, any prices, commissions, discounts, or other financial figures used to determine the award, as well as the final contract amount, are subject to public disclosure. In determining whether to release documents, the State will detrimentally rely on Bidders's marking of documents, as required by these bidding instructions, as being either "Confidential" or "Trade Secret" or "PROTECTED". By submitting a response, Bidder agrees to defend, indemnify & hold harmless the State of South Carolina, its officers & employees, from every claim, demand, loss, expense, cost, damage or injury, including attorney's fees, arising out of or resulting from the State withholding information that Bidder marked as "confidential" or "trade secret" or "PROTECTED".

9.4 POSTING OF INTENT TO AWARD
The SE-370, Notice of Intent to Award, will be posted at the following location:

<table>
<thead>
<tr>
<th>Room or Area of Posting</th>
<th>NA</th>
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<tbody>
<tr>
<td>Building Where Posted</td>
<td>NA</td>
</tr>
<tr>
<td>Address of Building</td>
<td>NA</td>
</tr>
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WEB site address (if applicable): http://academicdepartments.musc.edu/vpfa/eandf/construction_projects/index.html

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

A. by email to protest-ose@mmo.sc.gov,
B. by facsimile at 803-737-0639, or
C. by post or delivery to 1201 Main Street, Suite 600, Columbia, SC 29201.

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

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
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. Taxpayers must maintain evidence of work performed for a State contract by the minority subcontractor. Questions regarding the tax credit and how to file are to be referred to: SC Department of Revenue, Research and Review, Phone: (803) 898-5786, Fax: (803) 898-5888. The subcontractor must be certified as to the criteria of a "Minority Firm" by the Governor's Office of Small and Minority Business Assistance (OSMBA). Certificates are issued to subcontractors upon successful completion of the certification process. Questions regarding subcontractor certification are to be referred to: Governor's Office of Small and Minority Business Assistance, Phone: (803) 734-0657, Fax: (803) 734-2498. Reference: SC §11-35-5010 – Definition for Minority Subcontractor & SC §11-35-5230 (B) – Regulations for Negotiating with State Minority Firms.

9.9 OTHER SPECIAL CONDITIONS OF THE WORK

END OF DOCUMENT
BIDDERS SHALL SUBMIT BIDS ON ONLY BID FORM SE-330.

BID SUBMITTED BY: ________________________________
(Bidder’s Name)

BID SUBMITTED TO: Medical University of South Carolina
(Owner’s Name)

FOR: PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade

PROJECT NUMBER: H51-N345-JM

OFFER

§ 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 conditions of the Bidding Documents.

§ 2. Pursuant to Section 11-35-3030(1) of the SC Code of Laws, as amended, Bidder has submitted Bid Security as follows in the amount and form required by the Bidding Documents:

- [ ] Bid Bond with Power of Attorney
- [ ] Electronic Bid Bond
- [ ] Cashier’s Check

(Bidder check one)

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

(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):

$ __________________________ which sum is hereafter called the Base Bid.

(Bidder - insert Base Bid Amount on line above)


§ 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.

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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 Classification work listed:

<table>
<thead>
<tr>
<th>SUBCONTRACTOR CLASSIFICATION By License Classification and/or Subclassification (Completed by Owner)</th>
<th>SUBCONTRACTOR'S PRIME CONTRACTOR'S NAME (Must be completed by Bidder)</th>
<th>SUBCONTRACTOR'S PRIME CONTRACTOR'S SC LICENSE NUMBER (Requested, but not Required)</th>
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<td><strong>BASE BID</strong></td>
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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.
INSTRUCTIONS FOR
SUBCONTRACTOR LISTING

1. Section 7 of the Bid Form sets forth an Owner developed list of contractor/subcontractor specialties by contractor license category and/or subcategory for which bidder is required to identify the entity (subcontractor(s) and/or himself) Bidder will use to perform the work of each listed specialty.
   a. **Column A:** The Owner fills out this column, which identifies the contractor/subcontractor specialties for which the bidder must list either a subcontractor or himself as the entity that will perform this work. Subcontractor specialties are identified by contractor license categories or subcategories listed in Title 40 of the South Carolina Code of laws. If the owner has not identified a specialty, the bidder does not list a subcontractor.
   b. **Columns B and C:** In these columns, the Bidder identifies the subcontractors it will use for the work of each specialty listed by the Owner in Column A. Bidder must identify only the subcontractor(s) who will perform the work and no others. Bidders should make sure that their identification of each subcontractor is clear and unambiguous. A listing that could be any number of different entities may be cause for rejection of the bid as non-responsive. For example, a listing of M&M without more may be problematic if there are multiple different licensed contractors in South Carolina whose names start with M&M.

2. **Subcontractor Defined:** For purposes of subcontractor listing, a subcontractor is an entity who will perform work or render service to the prime contractor to or about the construction site pursuant to a contract with the prime contractor. Bidder should not identify sub-subcontractors in the spaces provided on the bid form but only those entities with which bidder will contract directly. Likewise, do not identify material suppliers, manufacturers, and fabricators that will not perform physical work at the site of the project but will only supply materials or equipment to the bidder or proposed subcontractor(s).

3. **Subcontractor Qualifications:** Bidder must only list subcontractors who possess a South Carolina Contractor’s license with the license classification and/or subclassification identified by the Owner in the first column on the left. The subcontractor license must also be within the appropriate license group for the work of the specialty. If Bidder lists a subcontractor who is not qualified to perform the work, the Bidder will be rejected as non-responsive.

4. **Use of Own forces:** If under the terms of the Bidding Documents, Bidder is qualified to perform the work of a listed specialty and Bidder does not intend to subcontract such work but to use Bidder’s own employees to perform such work, the Bidder must insert its own name in the space provided for that specialty.

5. **Use of Multiple Subcontractors:**
   a. If Bidder intends to use multiple subcontractors to perform the work of a single specialty listing, Bidder must insert the name of each subcontractor Bidder will use, preferably separating the name of each by the word “and”. If Bidder intends to use both his own employees to perform a part of the work of a single specialty listing and to use one or more subcontractors to perform the remaining work for that specialty listing, bidder must insert his own name and the name of each subcontractor, preferably separating the name of each with the word “and”. Bidder must use each entity listed for the work of a single specialty listing in the performance of that work.
   b. **Optional Listing Prohibited:** Bidder may not list multiple subcontractors for a specialty listing, in a form that provides the Bidder the option, after bid opening or award, to choose to use one or more but not all the listed subcontractors to perform the work for which they are listed. A listing, which on its face requires subsequent explanation to determine whether it is an optional listing, is non-responsive. If bidder intends to use multiple entities to perform the work for a single specialty listing, bidder must clearly set forth on the bid form such intent. Bidder may accomplish this by simply inserting the word “and” between the names of each entity listed for that specialty. Agency will reject as non-responsive a listing that contains the names of multiple subcontractors separated by a blank space, the word “or”, a virgule (that is a '/'), or any separator that the Agency may reasonably interpret as an optional listing.

6. If Bidder is awarded the contract, bidder must, except with the approval of the Agency for good cause shown, use the listed entities to perform the work for which they are listed.

7. If bidder is awarded the contract, bidder will not be allowed to substitute another entity as subcontractor in place of a subcontractor listed in Section 7 of the Bid except for one or more of the reasons allowed by the SC Code of Laws.

8. Bidder’s failure to identify an entity (subcontractor or himself) to perform the work of a subcontractor specialty listed in the first column on the left will render the Bid non-responsive.
§ 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 Ann § 11-35-3020(b)(i).

§ 9. TIME OF CONTRACT PERFORMANCE AND LIQUIDATED DAMAGES

a) CONTRACT TIME
Bidder agrees that the Date of Commencement of the Work shall be established in a Notice to Proceed to be issued by the Owner. Bidder agrees to substantially complete the Work within 120 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 $250.00 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. AGREEMENTS

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

ELECTRONIC BID BOND NUMBER: 

SIGNATURE AND TITLE: 

BF 3
SE-330
LUMP SUM BID FORM

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATION

SC Contractor's License Number(s): ________________________________

Classification(s) & Limits: ________________________________

Subclassification(s) & Limits: ________________________________

By signing this Bid, the person signing reaffirms all representation and certification made by both the person signing and the Bidder, including without limitation, those appearing in Article 2 of the Instructions to Bidders, is expressly incorporated by reference.

BIDDER’S LEGAL NAME: ________________________________

ADDRESS: ________________________________

______________________________

TELEPHONE: ________________________________

EMAIL: ________________________________

SIGNATURE: ________________________________  DATE: __________

PRINT NAME: ________________________________

TITLE: ________________________________
FORM OF AGREEMENT


Copies of the Form of Agreement are available for examination at the office of the Architect.
OSE FORM 00501
STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

AGENCY: Medical University of SC
PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade
PROJECT NUMBER: H51-N345-JM

1. STANDARD MODIFICATIONS TO AIA A101-2007
1.1 These Standard Modifications amend or supplement the Standard Form of Agreement Between Owner and Contractor (AIA Document A101-2007) and other provisions of Bidding and Contract Documents as indicated below.
1.2 All provisions of A101-2007, which are not so amended or supplemented, remain in full force and effect.

2. MODIFICATIONS TO A101
2.1 Insert the following at the end of Article 1:

2.2 Delete Section 3.1 and substitute the following:
3.1 The Date of Commencement of the Work shall be the date fixed in a Notice to Proceed issued by the Owner. The Owner shall issue the Notice to Proceed to the Contractor in writing, no less than seven days prior to the Date of Commencement. Unless otherwise provided elsewhere in the contract documents, and provided the contractor has secured all required insurance and surety bonds, the contractor may commence work immediately after receipt of the Notice to Proceed.

2.3 Delete Section 3.2 and substitute the following:
3.2 The Contract Time as provided in Section 9(a) of the Bid Form for this Project shall be measured from the Date of Commencement. Contractor agrees that if the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, the Owner shall be entitled to withhold or recover from the Contractor Liquidated Damages in the amounts set forth in Section 9(b) of the Bid Form, subject to adjustments of this Contract Time as provided in the Contract Documents.

2.4 In Section 5.1.1, insert the words “and Owner” after the phrase “Payment submitted to the Architect.”

2.5 Delete Section 5.1.3 and substitute the following:
5.1.3 The Owner shall make payment of the certified amount to the Contractor not later than 21 days after receipt of the Application for Payment.

2.6 In Section 5.1.6, insert the following after the phrase “Subject to other provisions of the Contract Documents”:
and subject to Title 12, Chapter 8, Section 550 of the South Carolina Code of Laws, as amended (Withholding Requirements for Payments to Non-Residents).

In the spaces provided in Sub-Sections 1 and 2 for inserting the retainage amount, insert “three and one-half percent (3.5%).”

2.7 In Section 5.1.8, delete the word “follows” and the colon and substitute the following:

2.8 In Section 5.1.9, delete the words “Except with the Owner’s prior approval, the” before the word “Contractor.”

2.9 In Section 5.2.2, delete the number 30 and substitute the number 21, delete everything following the words “Certificate for Payment” and place a period at the end of the resulting sentence.

2.10 Delete the language of Sections 6.1 and 6.2 and substitute the word “Reserved” for the deleted language of each Section.

2.11 Delete the language of Section 8.2 and substitute the word “Reserved.”
OSE FORM 00501
STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

2.12 In Section 8.3, make the word “Representative” in the title plural, delete everything following the title, and substitute the following:

8.3.1 Owner designates the individual listed below as its Senior Representative (“Owner's Senior Representative”), which individual has the responsibility for and, subject to Section 7.2.1 of the General Conditions, the authority to resolve disputes under Section 15.6 of the General Conditions:

Name: Phil Gerald
Title: 
Address: 23B Ehrhardt Street, Charleston, SC 29425
Telephone: 843-792-5304  FAX: 843-792-8377
Email: geraldp@musc.edu

8.3.2 Owner designates the individual listed below as its Owner's Representative, which individual has the authority and responsibility set forth in Section 2.1.1 of the General Conditions:

Name: James Stewart
Title: 
Address: 97 Jonathan Lucas Street, Charleston, SC 29425
Telephone: 843-792-3753  FAX: 843-792-0251
Email: stewartjh@musc.edu

2.13 In Section 8.4, make the word “Representative” in the title plural, delete everything following the title, and substitute the following:

8.4.1 Contractor designates the individual listed below as its Senior Representative (“Contractor's Senior Representative”), which individual has the responsibility for and authority to resolve disputes under Section 15.6 of the General Conditions:

Name: 
Title: 
Address: 
Telephone:  FAX: 
Email: 

8.4.2 Contractor designates the individual listed below as its Contractor's Representative, which individual has the authority and responsibility set forth in Section 3.1.1 of the General Conditions:

Name: 
Title: 
Address: 
Telephone:  FAX: 
Email: 

2.14 Add the following Section 8.6.1:

8.6.1 The Architect’s representative:

Name: 
Title: 
Address: 
Telephone:  FAX: 
Email: 

2 of 3
OSE FORM 00501
STANDARD MODIFICATIONS TO AGREEMENT BETWEEN OWNER AND CONTRACTOR

2.15 In Section 9.1.7, Sub-Section 2, list the following documents in the space provided for listing documents:

- SE-310, Invitation for Construction Services
- Instructions to Bidders (AIA Document A701-1997)
- OSE Form 00201, Standard Supplemental Instructions to Bidders
- Contractor’s Bid (Completed Bid Form)
- SE-370, Notice of Intent to Award

2.16 In Article 10, delete everything after the first sentence.

END OF DOCUMENT
General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)
CHP Research Building Emergency Power/Fire Pump System Upgrade
H51-N345-JM
College of Health Professions
141 Rutledge Avenue
Charleston, SC 29403

THE OWNER:
(Name, legal status and address)
Medical University of South Carolina
Engineering & Facilities / Administration
97 Jonathan Lucas Street PG 216B2 / MSC 190
Charleston, SC 29403

THE ARCHITECT:
(Name, legal status and address)
GWA, Inc., Electrical Engineers
168 Laurelhurst Avenue
Columbia, SC 29210-3824

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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.

§ 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. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect’s duties.

§ 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 INITIAL DECISION MAKER
The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

§ 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.
§ 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, including the Drawings and Specifications, 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 publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

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

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

ARTICLE 2 OWNER
§ 2.1 GENERAL
§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner’s approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner’s authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic’s lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner’s interest therein.

§ 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 any part thereof.
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. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner 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.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 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 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 Order 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. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. 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.

§ 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 errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

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

§ 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 the building permit as well as for other 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.

§ 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. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 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,

1. 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 (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor’s costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 SUPERINTENDENT
§ 3.9.1 The Contractor shall employ a competent superintendent 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 through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect 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 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 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.
§ 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.

§ 3.12.6 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, 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
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
cumber the site with materials or equipment.

§ 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
evacuation. 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), 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 Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

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

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

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner’s representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general 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, 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 reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known 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 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 review 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 interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect’s response to such requests will be made in writing within any time limits agreed upon or otherwise 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, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 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. The Architect’s response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

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, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect 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 or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. 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 or Architect makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS
By appropriate agreement, written where legally required for validity, 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 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.

§ 5.4 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.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor’s rights and obligations under the subcontract.

§ 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.

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 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner’s own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 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.

§ 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 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.

§ 7.3 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 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

1. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
2. Unit prices stated in the Contract Documents or subsequently agreed upon;
3. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
§ 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 determine 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 the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, 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;
.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; and
.5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 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.
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, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of 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 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 Contractor’s control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then 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.

§ 9.2 SCHEDULE OF VALUES
Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, 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.

§ 9.3 APPLICATIONS FOR PAYMENT
§ 9.3.1 At least ten days before the date established for each progress payment, 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 if provided for in the Contract Documents.
§ 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. 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.

§ 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 proper 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 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, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor’s right to payment, or (4) 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 may 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. 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
§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 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, 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 date established in the Contract Documents the amount certified by the Architect or awarded by binding
dispute resolution, 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 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.

§ 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 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 will make an inspection to determine whether the Work or designated portion thereof is substantially complete. 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.

§ 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 and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

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

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.
§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 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 will promptly make such inspection 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.

§ 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 and (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. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys’ fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed 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 previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

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 Sub-subcontractors; and
§ 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 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), 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.

§ 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.

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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.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, 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 in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, 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), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 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 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 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 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.

ARTICLE 11 INSURANCE AND BONDS
§ 11.1 CONTRACTOR’S LIABILITY INSURANCE
§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor’s operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 Claims under workers’ compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor’s employees;
.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor’s employees;
.4 Claims for damages insured by usual personal injury liability coverage;
.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
.6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
.7 Claims for bodily injury or property damage arising out of completed operations; and
.8 Claims involving contractual liability insurance applicable to the Contractor’s obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the

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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.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days’ prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect’s consultants as additional insureds for claims caused in whole or in part by the Contractor’s negligent acts or omissions during the Contractor’s operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor’s negligent acts or omissions during the Contractor’s completed operations.

§ 11.2 OWNER’S LIABILITY INSURANCE

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, the Owner 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 without optional deductibles. 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 Sub-subcontractors 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 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 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 Owner 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. 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 Contractor 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 Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor 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 Contractor.

§ 11.3.7 WAIVERS OF SUBROGATION
The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect’s consultants, separate contractors described in Article 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 covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner 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, sub-subcontractors, 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 Owner’s property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner 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 Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner’s duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. 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 after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner 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 Owner’s exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.4.2 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 Architect’s request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect’s examination 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 and to make a claim for breach of warranty. 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.

§ 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.

§ 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 shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. 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.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner’s rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 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 thereunder, except as may be specifically agreed in writing.

§ 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 and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 TIME LIMITS ON CLAIMS
The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

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 30 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 all Work to be stopped;
.2 An act of government, such as a declaration of national emergency that requires 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; or
.4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor’s request, reasonable evidence as required by Section 2.2.1.

§ 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.

§ 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 repeatedly 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;
.2 fails to make payment to Subcontractors for materials or labor in accordance with 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, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, 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 Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.
§ 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. Adjustment of the Contract Sum shall include profit. 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 for the Owner’s convenience and without cause.

§ 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; and
.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.

§ 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, along with reasonable overhead and profit on the Work not executed.

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. 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 Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party 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.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE
Pending final resolution of a Claim, 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 prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

§ 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.
§ 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.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES
The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to the Work. This mutual waiver includes:

1. damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

2. damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party’s termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 INITIAL DECISION
§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim if the Initial Decision Maker concludes that, in the Initial Decision Maker’s sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner’s expense.

§ 15.2.4 If the Initial Decision Maker 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 Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.
§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 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.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic’s lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION
§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator’s fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 ARBITRATION
§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER
§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration
permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.
Certification of Document’s Authenticity
AIA® Document D401™ – 2003

I, F. Drucilla Brookshire, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 13:34:58 on 06/30/2016 under Order No. 6472917183_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2007, General Conditions of the Contract for Construction, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

(Signed)

Vice President

(Title)

June 30, 2016

(Dated)
OSE FORM 00811
STANDARD SUPPLEMENTARY CONDITIONS

AGENCY: Medical University of SC
PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade
PROJECT NUMBER: H51-N345-JM

1. GENERAL CONDITIONS
The General Conditions of the Contract for Construction, AIA Document A201, 2007 Edition, Articles 1 through 15 inclusive, is a part of this Contract and is incorporated as fully as if herein set forth. For brevity, AIA Document A201 is also referred to in the Contract Documents collectively as the "General Conditions."

2. STANDARD SUPPLEMENTARY CONDITIONS
2.1 The following supplements modify, delete and/or add to the General Conditions. Where any portion of the General Conditions is modified or any paragraph, Section or clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of the General Conditions shall remain in effect.

2.2 Unless otherwise stated, the terms used in these Standard Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

3. MODIFICATIONS TO A201-2007
3.1 Insert the following at the end of Section 1.1.1:

3.2 Delete the language of Section 1.1.8 and substitute the word “Reserved.”

3.3 Add the following Section 1.1.9:
1.1.9 NOTICE TO PROCEED
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.

3.4 Insert the following at the end of Section 1.2.1:
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.

3.5 Delete Section 1.5.1 and substitute the following:
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.

3.6 Delete Section 2.1.1 and substitute the following:
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 § 8.2 of the Agreement.]

3.7 Delete Section 2.1.2 and substitute the following:
2.1.2 The Owner shall furnish to the Contractor within fifteen 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.
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3.8 Delete Section 2.2.3 and substitute the following:

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.

3.9 Replace the period at the end of the last sentence of Section 2.2.4 with a semicolon and insert the following after the inserted semicolon:

“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.”

3.10 Delete Section 2.2.5 and substitute the following:

2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor with two hard copies and one electronic copy (.pdf format) of the Contract Documents. The Contractor may make reproductions of the Contract Documents pursuant to Section 1.5.2.

3.11 Add the following Sections 2.2.6 and 2.2.7:

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.

3.12 Delete Section 2.4 and substitute the following:

2.4 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.

3.13 Insert the following at the end of Section 3.2.1:

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.

3.14 In the third sentence of Section 3.2.4, insert the word “latent” before the word “errors.”

3.15 In the last sentence of Section 3.3.1, insert the words “by the Owner in writing” after the word “instructed.”

3.16 Delete the third sentence of Section 3.5 and substitute the following sentences:

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.
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3.17 Insert the following at the end of Section 3.6:
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.

3.18 In Section 3.7.1, delete the words “the building permit as well as for other” and insert the following sentence at the end of this section:
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.

3.19 Delete the last sentence of Section 3.7.5 and substitute the following:
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.

3.20 Delete the last sentence of Section 3.8.2.3 and substitute the following:
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.

3.21 In Section 3.9.1, insert a comma after the word “superintendent” in the first sentence and insert the following after the inserted comma:
acceptable to the Owner,

3.22 Delete Section 3.9.2 and substitute the following:
3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner the name and qualifications of a proposed superintendent. The Owner may reply within 14 days to the Contractor in writing stating (1) whether the Owner has reasonable objection to the proposed superintendent or (2) that the Owner requires additional time to review. Failure of the Owner to reply within the 14-day period shall constitute notice of no reasonable objection.

3.23 After the first sentence in Section 3.9.3, insert the following sentence:
The Contractor shall notify the Owner, in writing, of any proposed change in the superintendent, including the reason therefore, prior to making such change.

3.24 Delete Section 3.10.3 and substitute the following:
3.10.3 Additional requirements, if any, for the construction 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 primavera-type 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 Contractor 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.

3.25 Add the following Section 3.10.4:
3.10.4 Owner’s review and acceptance of 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.
3.26 Add the following Section 3.12.5.1:

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 or other authorities having jurisdiction for review and approval. 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 or other authorities having jurisdiction for approval.

3.27 In the fourth sentence of Section 3.12.10, after the comma following the words “licensed design professional,” insert the following:

who shall comply with reasonable requirements of the Owner regarding qualifications and insurance and

3.28 In Section 3.13, insert the section number “3.13.1” before the before the opening words “The Contractors shall.”

3.29 Add the following Sections 3.13.2 and 3.13.3:

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.

3.30 In the first sentence of Section 3.18.1, after the parenthetical “...(other than the Work itself),...” and before the word “...but...”, insert the following:

including loss of use resulting therefrom,

3.31 Delete Section 4.1.1 and substitute the following:

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.

3.32 Insert the following at the end of Section 4.2.1:

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.

3.33 Delete the first sentence of Section 4.2.2 and substitute the following:

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.

3.34 Delete the first sentence of Section 4.2.3 and substitute the following:

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.

3.35 In Section 4.2.5, after the words “evaluations of the” and before the word “Contractor’s,” insert the following:

Work completed and correlated with the

3.36 Delete the first sentence of Section 4.2.11 and substitute the following:

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.
3.37 Insert the following at the end of Section 4.2.12:
If either party disputes the Architect’s 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.

3.38 Delete Section 4.2.14 and substitute the following:
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.

3.39 Delete Section 5.2.1 and substitute the following:
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 (1) 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.

3.40 Delete Section 5.2.2 and substitute the following:
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.

3.41 In the first sentence of Section 5.2.3, delete the words “...or Architect...” in the two places they appear.

3.42 Delete the words “...or Architect...” in the in the first sentence of Section 5.2.4 and insert the following sentence at the end of Section 5.2.4:
The Contractor’s request for substitution must be made to the Owner in writing accompanied by supporting information.

3.43 Add the following Section 5.2.5:
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.

3.44 Add the following Section 5.2.6:
5.2.6 The Iran Divestment Act List is a list published by the State Fiscal Accountability Authority pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: http://procurement.sc.gov/PS/PS-iran-divestment.phtm( ) Consistent with Section 11-57-330(B), the Contractor shall not contract with any person to perform a part of the Work, if, at the time you enter into the subcontract, that person is on the then-current version of the Iran Divestment Act List.

3.45 In Section 5.3, delete everything following the heading “SUBCONTRACTUAL RELATIONS” and insert the following Sections 5.3.1, 5.3.2, 5.3.3, and 5.3.4:
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 13.2.1 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.

3.46 Delete the last sentence of Section 5.4.1.

3.47 Add the following Sections 5.4.4, 5.4.5 and 5.4.6:

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
claimants for claims arising prior to the Owner’s exercise of any rights under this conditional assignment.

3.48 Delete the language of Section 6.1.4 and substitute the word “Reserved.”

3.49 Insert the following at the end of Section 7.1.2:

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.

3.50 Delete Section 7.2.1 and substitute the following:

7.2.1 A Change Order is a written instrument prepared by the Architect (using State 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.

3.51 Add the following Sections 7.2.2, 7.2.3, 7.2.4, and 7.2.5:

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.

3.52 Delete 7.3.3 and substitute the following:

7.3 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:

- Mutual acceptance of a lump sum;
- Unit prices stated in the Contract Documents, except as provided in Section 7.3.4, or subsequently agreed upon;
- 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
- 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.

3.53 Delete Section 7.3.7 and substitute the following:

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:

- Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers’ compensation insurance;
- Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; and
- Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.

3.54 Delete Section 7.3.8 and substitute the following:

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.

3.55 Add the following Sections 7.5 and 7.6:

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.

3.56 Delete Section 8.2.2 and substitute the following:

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.

3.57 Delete Section 8.3.1 and substitute the following:

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.

3.58 Insert the following at the end of Section 9.1:
All changes to the Contract Sum shall be adjusted in accordance with Section 7.3.3.

3.59 Delete Section 9.2 and substitute the following:

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.

3.60 Delete Section 9.3.1 and substitute the following:

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.

3.61 In Section 9.3.2, add the following words to the end of the second sentence:

provided such materials or equipment will be subsequently incorporated in the Work.

Insert the following at the end of Section 9.3.2:

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.

3.62 In Section 9.4.2, in the first sentence, after the words “Work has progressed to the point indicated,” insert the following:

in both the Application for Payment and, if required to be submitted by the Contractor, the accompanying current construction schedule.

In the last sentence, delete the third item starting with “(3) reviewed copies” and ending with “Contractor’s right to payment,”

3.63 In Section 9.5.1, in the first sentence, delete the word “may” after the opening words “The Architect” and substitute the word “shall.”

In Section 9.5.1, insert the following sentence after the first sentence:

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.

3.64 In Section 9.6.2, delete the word “The...” at the beginning of the first sentence and substitute the following:

Pursuant to Chapter 6 of Title 29 of the South Carolina Code of Laws, as amended, the

3.65 Delete Section 9.7 and substitute following:

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 a 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.

3.66 Insert the following words at the end of the sentence in Section 9.8.1:

and when all required occupancy permits, if any, have been issued and copies have been delivered to the Owner.
3.67 In Section 9.8.2, insert the word “written” after the word “comprehensive” and before the word “list.”

3.68 Delete Section 9.8.3 and substitute the following:

9.8.3.1 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 reinspections or, at the Owner’s option, the costs may be deducted from payments due to the Contractor.

9.8.3.2 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.

3.69 In the second sentence of Section 9.8.5, delete the words “and consent of surety, if any.”

3.70 In the first sentence of Section 9.9.1, delete the words “Section 11.3.1.5” and substitute the words “Section 11.3.1.3.”

3.71 Delete Section 9.10.1 and substitute the following:

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 reinspections 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.

3.72 Delete the first sentence of Section 9.10.2 and substitute the following:

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.
3.73 Delete the first sentence of Section 9.10.3 and substitute the following:

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.

3.74 Delete Section 9.10.5 and substitute the following:

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.

3.75 Add the following Section 9.10.6:

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.

3.76 Delete Section 10.3.1 and substitute the following:

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.

3.77 Insert the following at the end of Section 10.3.2:

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.

3.78 Delete Section 10.3.3 and substitute the following:

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.

3.79 In Section 10.3.5, delete the word “The” at the beginning of the sentence and substitute the following:

In addition to its obligations under Section 3.18, the

3.80 Delete the language of Section 10.3.6 and substitute the word “Reserved.”

3.81 Insert the following at the end of Section 10.4:

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.

3.82 Delete 11.1.2 and substitute the following:

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.
OSE FORM 00811
STANDARD SUPPLEMENTARY CONDITIONS

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

2. BUSINESS AUTO LIABILITY (including All Owned, Non-owned, and Hired Vehicles):
   (a) Combined Single Limit $1,000,000

3. WORKER'S COMPENSATION:
   (a) State Statutory
   (b) Employers Liability $100,000 per Acc.
       $500,000 Disease, Policy Limit
       $100,000 Disease, Each Employee

In lieu of separate insurance policies for Commercial General Liability, Business Auto Liability, and Employers Liability, the Contractor may provide an umbrella policy meeting or exceeding all coverage requirements set forth in this Section 11.1.2. The umbrella policy limits shall not be less than $3,000,000.

3.83 Delete Section 11.1.3 and substitute the following:

11.1.3 Prior to commencement of the Work, and thereafter upon replacement of each required policy of insurance, Contractor shall provide to the Owner a written endorsement to the Contractor’s general liability insurance policy that:
   (i) names the Owner as an additional insureds for claims caused in whole or in part by the Contractor’s negligent acts or omissions during the Contractor’s operations;
   (ii) 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
   (iii) 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, Contractor shall provide to the Owner a signed, original certificate of liability insurance (ACORD 25). Consistent with this Section 11.1, the certificate shall identify the types of insurance, state the limits of liability for each type of coverage, name the Owner a Consultants as Certificate Holder, provide that the general aggregate limit applies per project, and provide that coverage is written on an occurrence basis. Both the certificates and the endorsements must be received directly from either the Contractor's insurance agent or the insurance company. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, naming the Owner as an additional insured for claims made under the Contractor’s completed operations, and otherwise meeting the above requirements, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

3.84 Delete Section 11.1.4 and substitute the following:

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.

3.85 In Section 11.3.1, delete the first sentence and substitute the following:

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.

3.86 Delete the language of Section 11.3.1.2 and substitute the word “Reserved.”

3.87 Delete the language of Section 11.3.1.3 and substitute the word “Reserved.”
3.88 **Delete Section 11.3.2** and substitute the following:

### 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 both be named insureds.

3.89 **Delete Section 11.3.3** and substitute the following:

### 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.

3.90 **Delete Section 11.3.4** and substitute the following:

#### 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.

3.91 **Delete the language of Section 11.3.5 and substitute the word “Reserved.”**

3.92 **Delete Section 11.3.6** and substitute the following:

#### 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.

3.93 **Delete the first sentence of Section 11.3.7** and substitute the following:

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect’s consultants, separate contractors described in Article 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.

3.94 **Delete the first sentence of Section 11.3.8** and substitute the following:

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.

3.95 **Delete Section 11.3.9** and substitute the following:

#### 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.

3.96 **Delete Section 11.3.10** and substitute the following:

#### 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.
3.97 Delete Section 11.4.1 and substitute the following:

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.

3.98 Delete Section 11.4.2 and substitute the following:

11.4.2 The Performance and Labor and Material Payment Bonds shall:
   .1 be issued by a surety company licensed to do business in South Carolina;
   .2 be accompanied by a current power of attorney and certified by the attorney-in-fact who executes the bond on the behalf of the surety company; and
   .3 remain in effect for a period not less than one (1) year following the date of Substantial Completion or the time required to resolve any items of incomplete Work and the payment of any disputed amounts, whichever time period is longer.

3.99 Add the following Sections 11.4.3 and 11.4.4:

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.

3.100 Delete Section 12.1.1 and substitute the following:

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.

3.101 In Section 12.2.2.1, delete the words “and to make a claim for breach of warranty” at the end of the third sentence.

3.102 In Section 12.2.2.3, add the following to the end of the sentence:

unless otherwise provided in the Contract Documents.

3.103 Insert the following at the end of Section 12.2.4:

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.

3.104 Delete Section 13.1 and substitute the following:

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.

3.105 Delete Section 13.2, including its Sub-Sections 13.2.1 and 13.2.2, and substitute the following:

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.
3.106 Delete Section 13.3 and substitute the following:

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 8.3.2 of the Agreement. Notice to Owner shall be to the address provided in Section 8.2.2 of the Agreement. Either party may designate a different address for notice by giving notice in accordance with this paragraph.

3.107 In Section 13.4.1, insert the following at the beginning of the sentence:

Unless expressly provided otherwise,

3.108 Add the following Section 13.4.3:

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

3.109 Delete Section 13.6 and substitute the following:

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.

3.110 Delete the language of Section 13.7 and substitute the word “Reserved.”

3.111 Add the following Sections 13.8 through 13.17:

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 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
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.

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]

3.112 Delete Section 14.1.1 and substitute the following:

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.
3.113 Insert the following at the end of Section 14.1.3:

Any adjustment to the Contract Sum pursuant to this Section shall be made in accordance with the requirements of Article 7.

3.114 In Section 14.1.4, replace the word “repeatedly” with the word “persistently.”

3.115 Delete Section 14.2.1 and substitute the following:

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.

3.116 In Section 14.2.2, delete the parenthetical statement “, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action,” immediately following the word “Owner” in the first line.

3.117 In Section 14.2.4, replace the words “Initial Decision Maker” with the word “Architect.”

3.118 Add the following Section 14.2.5:

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.

3.119 Delete the second sentence of Section 14.3.2 and substitute the following:

Any adjustment to the Contract Sum made pursuant to this section shall be made in accordance with the requirements of Article 7.3.3.

3.120 Delete Section 14.4.1 and substitute the following:

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.

3.121 Delete Section 14.4.2 and substitute the following:

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.

3.122 Delete Section 14.4.3 and substitute the following:

14.4.3 In case of such termination for the Owner’s convenience, the Contractor shall be entitled to receive payment for Work executed, 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.
3.123 Add the following Sections 14.4.4, 14.4.5, and 14.5:

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.

3.124 Insert the following sentence after the second sentence of Section 15.1.1:

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.

3.125 Delete Section 15.1.2 and substitute the following:

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.

3.126 Delete Section 15.1.3 and substitute the following:

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.

3.127 Insert the following at the end of Section 15.1.5.1:

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.

3.128 Insert the following Sub-Sections at the end of Section 15.1.5.2:

.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.
3.129 Delete Section 15.1.6 and substitute the following:

**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).

3.130 Add the following Section 15.1.7:

**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).

3.131 Delete the language of Sections 15.2, 15.3, and 15.4, including all Sub-Sections, and substitute the word “Reserved” for the deleted language of each Section and Sub-Section.

3.132 Add the following Sections 15.5 and 15.6 with their sub-sections:

**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.

3.133 Add the following Article 16:

ARTICLE 16 PROJECT-SPECIFIC REQUIREMENTS AND INFORMATION

16.1. Inspection Requirements: (Indicate the inspection services required by the Contract)

☐ Special Inspections are required and are not part of the Contract Sum. (see section 01400)
☐ Building Inspections are required and are not part of the Contract Sum. (see section 01400)

The inspections required for this Work are:

(Indicate which services are required and the provider)

☐ Civil:
☐ Structural:
☐ Mechanical:
☐ Plumbing:
☐ Electrical:
☐ 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 If none, enter NONE)

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

16.4. Requirements for Shop Drawings and other submittals, if any, including number, procedure for submission, list of materials to be submitted, etc. (Refer to attachments as needed. If none, enter NONE)

16.5. Requirements for signage, on-site office or trailer, utilities, restrooms, etc., in addition to the Contract, if any. (Refer to attachments as needed. If none, enter NONE)

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

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

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

Name: 
Address: 

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

Name: 
Address: 

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

Name: 
Address: 

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

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

State Project Name: CHP Research Building Emergency Power/Fire Pump System Upgrade
State Project Number: H51-N345-JM

Brief Description of Awarded Work, as found on the SE-330 or SE-332, Bid Form: Replacement of existing emergency generator. System modifications include demolition, new steel platform, roof work, electrical distribution and power connections to existing equipment.

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

Name: GWA, Inc.
Address: 168 Laurelhurst Avenue
Columbia, SC 29210

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

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

DATED this day of , 20__ BOND NUMBER __________________________

shall be no earlier than Date of Contract)

CONTRACTOR

By: _______________ (Seal)
Print Name: __________________________
Print Title: __________________________
Witness: __________________________

SURETY

By: _______________ (Seal)
Print Name: __________________________
Print Title: __________________________
(Attach Power of Attorney)
Witness: __________________________

(Additional Signatures, if any, appear on attached page)
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:
   5.1 Surety in accordance with the terms of the Contract; or
   5.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.
   5.3 The balance of the Contract Sum due either the Surety or another contractor shall be reduced by the amount of damages as described in paragraph 7.

6. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond 15 days after receipt of written notice from the Agency to the Surety demanding that the Surety perform its obligations under this Bond, and the Agency shall be entitled to enforce any remedy available to the Agency.
   6.1 If the Surety proceeds as provided in paragraph 4.4 and the Agency refuses the payment tendered or the Surety has denied liability, in whole or in part, then without further notice the Agency shall be entitled to enforce any remedy available to the Agency.

6.2 Any dispute, suit, action or proceeding arising out of or relating to this Bond shall be governed by the Dispute Resolution process defined in the Contract Documents and the laws of the State of South Carolina.

7. After the Agency has terminated the Contractor's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Agency shall be those of the Contractor under the Contract, and the responsibilities of the Agency to the Surety shall those of the Agency under the Contract. To a limit of the amount of this Bond, but subject to commitment by the Agency of the Balance of the Contract Sum to mitigation of costs and damages on the Contract, the Surety is obligated to the Agency without duplication for:
   7.1 The responsibilities of the Contractor for correction of defective Work and completion of the Contract; and
   7.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and
   7.3 Damages awarded pursuant to the Dispute Resolution Provisions of the Contract. Surety may join in any Dispute Resolution proceeding brought under the Contract and shall be bound by the results thereof; and
   7.4 Liquidated Damages, or if no Liquidated Damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. The Surety shall not be liable to the Agency or others for obligations of the Contractor that are unrelated to the Contract, and the Balance of the Contract Sum shall not be reduced or set-off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Agency or its heirs, executors, administrators, or successors.

9. The Surety hereby waives notice of any change, including changes of time, to the contract or to related subcontracts, purchase orders and other obligations.

10. Notice to the Surety, the Agency or the Contractor shall be mailed or delivered to the address shown on the signature page.

11. Definitions
   11.1 Balance of the Contract Sum: The total amount payable by the Agency to the Contractor under the Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts to be received by the Agency in settlement of insurance or other Claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.
   11.2 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform the Contract or otherwise to comply with the terms of the Contract.
LABOR & MATERIAL PAYMENT BOND

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

Name: ____________________________
Address: ____________________________

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

Name: ____________________________
Address: ____________________________

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

Name: ____________________________
Address: ____________________________

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

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

State Project Name: CHP Research Building Emergency Power/Fire Pump System Upgrade
State Project Number: H51-N345-JM

Brief Description of Awarded Work, as found on the SE-330 or SE-332, Bid Form: Replacement of existing emergency generator. System modifications include demolition, new steel platform, roof work, electrical distribution and power connections to existing equipment.

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

Name: GWA, Inc.
Address: 168 Laurelhurst Avenue
Columbia, SC 29210

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

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

DATED this __________ day of __________, 2________ BOND NUMBER ________________________________

(shall be no earlier than Date of Contract)

CONTRACTOR
By: ____________________________ (Seal)
Print Name: ____________________________
Print Title: ____________________________
Witness: ____________________________

SURETY
By: ____________________________ (Seal)
Print Name: ____________________________
Print Title: ____________________________
Witness: ____________________________

(Attach Power of Attorney)

(Additional Signatures, if any, appear on attached page)
NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Agency to pay for all labor, materials and equipment required for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to the Agency, this obligation shall be null and void if the Contractor:
   2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and
   2.2 Defends, indemnifies and holds harmless the Agency from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract.

3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4. With respect to Claimants, and subject to the provisions of Title 29, Chapter 5 and the provisions of §11-35-3030(2)(c) of the SC Code of Laws, as amended, the Surety’s obligation under this Bond shall arise as follows:
   4.1 Every person who has furnished labor, material or rental equipment to the Contractor or its subcontractors for the work specified in the Contract, and who has not been paid in full therefore before the expiration of a period of ninety (90) days after the date on which the last of the labor was done or performed by him or material or rental equipment was furnished or supplied by him for which such claim is made, shall have the right to sue on the payment bond for the amount, or the balance thereof, unpaid at the time of institution of such suit and to prosecute such action for the sum or sums justly due him.
   4.2 A remote claimant shall have a right of action on the payment bond upon giving written notice by certified or registered mail to the Contractor within ninety (90) days from the date on which such person did or performed the last of the labor or furnished or supplied the last of the material or rental equipment upon which such claim is made.
   4.3 Every suit instituted upon a payment bond shall be brought in a court of competent jurisdiction for the county or circuit in which the construction contract was to be performed, but no such suit shall be commenced after the expiration of one year after the day on which the last of the labor was performed or material or rental equipment was supplied by the person bringing suit.

5. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety’s expense take the following actions:
   5.1 Send an answer to the Claimant, with a copy to the Agency, within sixty (60) days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
   5.2 Pay or arrange for payment of any undisputed amounts.
   5.3 The Surety’s failure to discharge its obligations under this paragraph 5 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this paragraph 5, the Surety shall indemnify the Claimant for the reasonable attorney’s fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.

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

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

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

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

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

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

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

13. DEFINITIONS

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

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

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

AGENCY: The Medical University of SC

PROJECT NAME: CHP Research Building Emergency Power/Fire Pump System Upgrade

PROJECT NUMBER: H51-N345-JM

CONTRACTOR: ______________________________ CONTRACT DATE: _______

This Contract is changed as follows: (Insert description of change in space provided below)

ADJUSTMENTS 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: __________

ADJUSTMENTS 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: __________

CONTRACTOR ACCEPTANCE:

BY: ____________________________________ Date: __________

(Signature of Representative)

Print Name: ______________________________

A/E RECOMMENDATION FOR ACCEPTANCE:

BY: ____________________________________ Date: __________

(Signature of Representative)

Print Name: ______________________________

AGENCY ACCEPTANCE AND CERTIFICATION:

BY: ____________________________________ Date: __________

(Signature of Representative)

Print Name: ______________________________

☐ Change is within Agency Construction Contract Change Order Certification of: $ __________

☐ Change is not within Agency Construction Contract Change Order Certification of: $ __________

Office of the State Engineer Authorization for change exceeding Agency Construction Contract Change Order Certification:

AUTHORIZED BY: ______________________________ DATE: __________

(OSE Project Manager)
SECTION 01 10 00

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 OWNER

A. The Owner of the Project is Medical University of South Carolina.

1.2 ARCHITECT/ENGINEER

A. The A/E of the Project is GWA, Inc., Electrical Engineers.

1.3 SCOPE OF WORK

A. Provide all labor, equipment, material, and operations required for complete, safe and operational system upgrades as required in accordance with drawings and specifications and subject to the terms and conditions of the contract.

B. The work includes:

1. Grounding in accordance with specifications, drawings and codes;
2. Complete distribution system for power including feeders, branch circuits and connections to outlets and devices for power utilization;
3. Emergency power system extension;
4. Cutting and patching as required for provision of the work;
5. Demolition as required for modifications to existing system including disposal of all materials removed.

1.4 SITE VISIT

A. Prior to bidding, this Contractor shall visit the job site and shall familiarize himself with all conditions under which work is to be performed and shall include in his bid all labor, material and operations required for a complete job.

1.5 CONTRACT TIME/LIQUIDATED DAMAGES

A. Contractor shall complete all work in 120 calendar days, including check-out and adjustment but excluding third-party inspections. The Contract Time, as defined in the General Conditions, shall begin to run on the date specified as date of commencement in the Notice to Proceed. The Liquidated Damages clause will take effect on the one hundred and twenty first (121st) day. Owner will retain the sum of $250.00 per day for each additional day after expiration of contract time, Sundays and holidays included, as liquidated damages.
1.6 CONTRACTOR’S USE OF PREMISES

A. Generally limit use of premises to areas indicated on drawings.

B. All Contractor employees, whether owner-employed or contracted, shall maintain a standard of dress acceptable to the Owner at all times while on state property. Contractor shall ensure that all personnel wear shoes, full-length trousers and shirts. Shorts and "tank tops" are not permitted.

C. Contractor shall provide visible identification for all workers on the Project.

D. All tobacco products are prohibited on state property.

E. Contractor’s personnel may not use MUSC property.

F. Provide, at no extra cost to the Owner, plastic sheeting or other suitable protection for furniture and other room contents. Coordinate with Owner to schedule this work with Owner’s cleaning program and routine maintenance as required. Control dust by cleaning at frequent intervals.

G. Power interruptions shall be scheduled and approved in writing with project manager seven calendar days in advance.

H. The phone number for emergency/security service is 843-792-4119.

I. Traffic Control: The Contractor shall determine requirements and provide all traffic control and safety measures as directed by the Owner and any other applicable jurisdictions. Ensure that traffic flow and construction operations are coordinated and that neither is obstructed by the other. Provide all required permits, signs, barriers, signals and personnel to accomplish safe and efficient operations.

J. Deliveries: Contractor may use Owner’s Shipping and Receiving Department to receive materials, however, Contractor is responsible for signing for and accepting materials upon notification of arrival. Owner will not sign for, accept, or be responsible for any material delivered to Contractor.

K. Contractor shall not use elevators for construction purposes, including transportation of materials.

L. Contractor shall clean work areas each day so that work can continue seamlessly on the following day.

1.7 FEES, PERMITS AND LICENSES

A. Fees for permits and licenses, including city and/or county business licenses for contractor and subcontractors, are included. Deliver permits and certificates to the Architect.

1.8 PROGRESS PAYMENTS


B. Contractor shall submit one original payment request on AIA forms G702 and G703 to the Architect. Include updated progress schedule with monthly request for payment.
1.9 CHANGE ORDERS
A. Change Order Forms: SE-380.

1.10 CONFERENCES
A. Pre-construction conference will be held within 7 days prior to Date of Commencement.

1.11 PROJECT MANAGEMENT
A. The Contractor and appropriate subcontractors shall attend regularly scheduled progress and work review meetings with the Architect and Owner's representatives, such meetings to be arranged to suit those concerned at Project start. Allow in bid for weekly meetings.

B. An experienced superintendent shall be continuously in attendance on the job during all phases of construction to coordinate and supervise the work. The Contractor shall not change or replace the job superintendent without the express permission of the Owner.

C. Contractor shall submit schedule of work for entire project, updated prior to weekly meetings, to identify work areas which require access during working hours.

1.12 CONSTRUCTION SEQUENCE
A. The Contractor is cautioned that the building will be occupied during the construction period. This contractor shall cooperate in all respects with MUSC staff to carry out the work with minimum disruption of both the owner's requirements and construction of the project.

1.13 PHASING OF THE WORK
A. Any specific phasing requirements will be determined at the pre-construction conference.

1.14 QUALITY ASSURANCE/CONTROL OF INSTALLATION
A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions.

C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

D. Protect all installed work from damage. Cost of repairing damage to buildings, building contents, and site during construction and corrective period resulting from this work is a part of this contract.

1.15 TEMPORARY TOILET / ELECTRICITY / WATER SERVICE
A. Contractor may use existing utilities. Contractor shall use power and water conservatively.

B. Contractor may use Owner's toilet facilities. Contractor shall keep such places clean and shall be responsible for any damage done by Contractor's workers. Failure to maintain satisfactory condition will deprive Contractor of the privilege to use Owner's facilities.

1.16 PARKING
A. Park and lock vehicles in areas authorized by Owner.

1.17 SIGNAGE
A. Site signage for contractor advertising is not permitted.

1.18 SECURITY
A. Provide security and facilities to protect Work and Owner’s operations from unauthorized entry, vandalism, or theft.

1.19 PROGRESS CLEANING
A. Provide an adequate number of waste receptacles at work site.
B. Remove all food, organic debris, waste materials and rubbish daily.
C. Contractor shall provide all equipment required to maintain site in a clean and orderly condition. Contractor shall not use any of the Owner’s supplies or equipment.

1.20 SAFETY PRECAUTIONS
A. Provide all warning signs, barriers, covers, rails, safety belts, and other appurtenances required to protect workmen, the public, residents, and Owner’s personnel in the vicinity of the Project. Comply with requirements of the Occupational Safety and Health Act, municipal and insurance regulations, and reasonable standards of good practice.
B. There is no asbestos anticipated, however, if asbestos is suspected, do not disturb but contact Owner via the A/E and Owner will abate asbestos. Proceed with work in this area only after asbestos abatement.

1.21 FINAL CLEANING
A. Execute final cleaning prior to final construction observation visit by A/E. Remove debris, waste, surplus materials, rubbish, and construction facilities from the site.

1.22 CLOSEOUT PROCEDURES / RECORD DOCUMENTS
A. Submit written certification that Contract Documents have been reviewed, Work has been inspected by Contractor and is complete in accordance with Contract Documents and ready for A/E’s review.
B. Operation and Maintenance (O&M) Manuals:
   1. Provide two (2) manuals, bound in a 3-ring binder of good quality, with stiff vinyl or cloth front and back.
   2. Include two (2) sets of approved shop drawings.
   3. Include maintenance instructions for all items, including name and address of supplier and name, address, and telephone number of person(s) to contact for service, and all testing and warranty information.
   4. Deliver to A/E prior to completion of the project.
C. Contractor shall maintain on the job site one complete set of A/E drawings for this project. All changes authorized by the Architect and/or the Owner as to the locations, sizes, etc. of equipment, conduit, fixtures, and/or other material and equipment shall be indicated in red on the drawings concurrently as the work progresses. At the completion of the project, Contractor shall turn marked-up prints over to A/E who will CAD the record drawings for contractor’s approval and signature, and from which a compact disk (CD) will be burned for the Owner.

D. Provide copies of all signed-off field reports showing completion of items noted.

E. Refer to General (AIA A201) and Supplementary Conditions (OSE Form 00811)

1. AIA G706, Contractor’s Affidavit of Payment of Debts and Claims; AIA G706A Contractor’s Affidavit of Release of Liens; AIA G707, Consent of Surety to Final Payment; SE-550, Certificate of Substantial Completion; and SE-560, Certificate of Final Completion shall be used for items 4 and 5 of paragraph 3.72.

1.23 WARRANTY

A. The Contractor agrees:

1. To correct defects in workmanship, materials, equipment, and operation and of all systems for a period of one year from the date of Substantial Completion.

2. To remove any item not specified or given written approval and replace it with an approved item.

3. That all systems provided will safely, quietly, and efficiently operate in accordance with the design.

B. Equipment and materials repaired or replaced during this one year corrective period are warranted for one year following date of correction.

C. This does not supersede manufacturer’s warranties which may extend beyond one year.

D. If existing devices and equipment are re-used, Contractor shall clean devices thoroughly and shall warrant all devices and equipment as if new, i.e., for one year from date of Substantial Completion. No existing service agreements will be accepted in lieu of a full “as new” warranty.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION – (Not Used)

END OF SECTION 01 10 00
SECTION 050520
POST INSTALLED STRUCTURAL ANCHORS

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. This Section includes the following:
1. Wedge anchors
2. Cartridge injection adhesive anchors
B. This specification section is only intended for use when specifically required by the drawings or other referencing specifications and structural applications. This section is not intended for use in non-structural applications or where not specifically referenced by the drawings or other specification sections.
C. Related Sections include the following:
1. Division 01 Section "Quality Requirements" for independent testing agency procedures and administrative requirements.
2. Division 05 Section "Structural Steel Framing" for anchorage of structural steel.
3. Division 05 Section "Cold Formed Metal Framing" for anchorage of cold form metal framing where specifically detailed in the contract documents.
4. Division 05 Section "Engineered Cold Formed Metal Framing" for anchorage of performance based cold form metal framing.

1.3 PERFORMANCE REQUIREMENTS
A. Product substitutions must have capacities equal to or greater than values calculated for each specific condition calculated when calculated using the data in the referenced ESR report and in accordance with the appropriate design procedure and standards required by the building code. See requirements for substitution submittals.

1.4 DEFINITIONS
A. Post Installed Structural Anchors: Anchors supporting and/or anchoring structural elements of the building which are installed into hardened concrete or masonry and that are specified in the contract documents or performance based shop drawing design submittals for structural elements.
B. Wedge Anchors: A torque-controlled anchor, with an integral cone expander and single piece steel expansion clip providing 360-degree contact with the base material while not requiring oversized holes for installation and an impact section to prevent thread damage with required nuts and washers.

C. Cartridge Injection Adhesive Anchors: An anchor system consisting of rod insert, nut, washer and a cartridge type, two-component polymer or hybrid mortar adhesive system dispensed and mixed through a static mixing nozzle supplied by the manufacturer.

1.5 SUBMITTALS

A. Product Data:
   1. Wedge Anchors
   2. Cartridge Injection Adhesive Anchors

B. Research/Evaluation Reports:
   1. Submit ICC reports for the following:
      a. Wedge Anchors
      b. Cartridge Injection Adhesive Anchors

C. Substitutions:
   1. Substitution requests may only be made using products with ICC-ESR reports for the product in the specific substrate.
   2. Substitution request shall include signed and sealed calculations demonstrating that the product is capable of providing equivalent performance of the specified product for each specific location and condition when calculated using the data in the referenced ESR report and in accordance with the appropriate design procedure and standards required by the building code.
   3. Substitution request shall specify the diameter and embedment depth of the substituted product
   4. Any increase in material cost resulting from the substitution shall be the responsibility of the contractor.

D. Manufacturer's Instruction: Manufacturer's Installation Instructions

E. Qualification Data: Submit installer qualification data as stated in Quality Assurance section. Qualifications shall be submitted in a letter format for each type of anchor to be installed, and shall include the following:
   1. The specific product to be used
   2. Complete description of installation procedure
   3. Personnel to be trained on anchor installation
   4. Date of Manufacturer training
   5. Manufacturer's training certificates or letter from manufacturer certifying training was complete with a list of individuals that were trained.
1.6 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."
   a. Coordinate meeting with individual preinstallation conferences for the following
   b. Structural Steel Framing
   c. Cold-Formed Metal Framing
   d. Rough Carpentry

B. Installer Qualifications: The installer shall be experienced in installing anchors equal to type, and into the substrate material required for this project

C. Installer Training: Conduct a thorough training session with the manufacturer's representative. Each individual responsible for the installation of anchors shall attend the training session. Training shall consist of a review of the complete process for the installation of the anchors and the use of proper equipment for drilling and installing the anchors, to include but not limited to:
   1. Hole drilling procedure. Clarify acceptability of rotary hammer drilling and/or core drilling.
   2. Hole drilling equipment
   3. Type and diameter of drill bits
   4. Hole preparation and hole cleaning technique
   5. Hole cleaning equipment
   6. Adhesive injection technique
   7. Adhesive injection equipment
   8. Anchor rod, nut and washer material requirements and associated cleaning requirements
   9. Anchor and Anchor rod installation
   10. Anchor tightening
   11. Adhesive curing requirements

D. Certifications: All anchors shall have an ICC ESR Evaluation report indicating conformance with the current applicable Acceptance Criteria for the building code applicable to the project.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Keep anchors, rod materials, nuts and washers in manufacturer's packaging with label intact until needed for use.

B. Keep anchors free of dirt and debris.

C. Store anchors in a clean dry area

D. Protect anchors from corrosion and deterioration.

E. Store anchors and adhesives in strict accordance with manufacturer's requirements.
PART 2 - PRODUCTS

2.1 MATERIALS

A. Nuts: Having a proof load stress equal or greater than the minimum tensile strength of the associated anchor where type and strength is not specifically indicated by anchor or adhesive manufacturer.

B. Washers: Of type and material compatible with nuts unless specifically indicated by anchor or adhesive manufacturer.

C. Plate Washers: Provide ASTM A 36 plate washers of size and configuration specifically indicated.

2.2 CORROSION RESISTANCE

A. Anchors and Anchor Bodies

1. Uncoated Carbon Steel: Carbon steel anchors uncoated and free from oil, lubricants and other deleterious substances. Acceptable for use as follows:
   a. Interior dry conditions

2. Zinc Plated: Zinc plating in accordance with ASTM B633, Type III Fe/Zn 5 (SC1) Acceptable for use as follows:
   a. Interior dry conditions

3. Hot Dip Galvanized: Carbon steel anchors with hot-dipped galvanized in accordance with ASTM A 153. Acceptable for use as follows:
   a. Interior dry conditions
   b. Exterior conditions
   c. Anchoring galvanized steel elements

4. Stainless Steel: AISI Type 304 or 316 stainless steel and complying with ASTM F 593. Acceptable for use as follows:
   a. Anchoring treated lumber elements
   b. Anchoring stainless steel elements

B. Nuts

1. Uncoated carbon steel: Acceptable for use as follows:
   a. With Uncoated Anchors

2. Hot Dip Galvanized: Hot-dipped galvanized in accordance with ASTM A 153. Acceptable for use as follows:
   a. With Zinc Plated Anchors
   b. With Hot Dip Galvanized Anchors
3. Stainless Steel: ASTM F594. Acceptable for use as follows:
   a. With Stainless Steel Anchors

C. Washers
1. Uncoated carbon steel: Acceptable for use as follows:
   a. With uncoated anchors
2. Hot Dip Galvanized: Hot-dipped galvanized in accordance with ASTM A 153. Acceptable for use as follows:
   a. With Hot Dip Galvanized Nuts
3. Stainless Steel: AISI Type 304 or 316 stainless steel. Acceptable for use as follows:
   a. With Stainless Steel Nuts

D. Plate Washers:
1. Uncoated carbon steel: Acceptable for use as follows:
   a. With Uncoated Nuts
2. Hot Dip Galvanized: Hot-dipped galvanized in accordance with ASTM A 153. Acceptable for use as follows:
   a. With Hot Dip Galvanized Nuts

2.3 WEDGE ANCHORS
A. Provide anchors with length identification markings conforming to ICC-ES AC01 or ICC-ES AC193.
B. Size: As indicated on drawings
C. Embedment depth: As indicated on the drawings but not less than the manufacturer’s documented minimum embedment depth. Where not specifically indicated use manufacturer’s minimum documented embedment depth.
   1. Embedment depth is from surface of concrete or masonry. Anchor lengths and extent of threads shall account for embedment depth, connected elements, plate washers, washers, nut and appropriate stick thru.
D. Concrete Anchors:
   1. Anchors shall be tested in accordance with ACI 355.2 and the most recent issue of ICC-ES AC193 including the following:
      a. All mandatory testing
      b. Shear and tension in cracked concrete.
      c. Critical and minimum edge distances and spacing
2. Anchors design shall be in accordance with ACI 318 Appendix D
3. Where not specifically indicated otherwise in contract documents or approved performance based shop drawings submittal anchors shall be as follows:
   a. Hilti Kwik Bolt TZ with nut and washer, of required finish, ICC ESR-1917
   b. Approved equal (See substitution requirements)

E. Masonry Anchors:
1. Anchors for masonry shall be tested in accordance with most recent edition of ICC-ES AC01 including the following
   a. All mandatory testing
   b. Seismic tension and shear
   c. Critical and minimum edge distances and spacing
2. Anchors design shall be in accordance with ACI 530
3. Where not specifically indicated otherwise in contract documents or approved performance based shop drawings submittal anchors shall be as follows:
   a. Hilti Kwik Bolt 3 with nut and washer, of required finish, ICC ESR-1385.
   b. Approved equal (See substitution requirements)

2.4 CARTRIDGE INJECTION ADHESIVE ANCHORS
A. Provide anchors with length identification markings conforming to ICC-ES AC58 or ICC-ES AC308.
B. Size: As indicated on drawings
C. Embedment depth: As indicated on the drawings but not less than the manufacturer's documented minimum embedment depth. Where not specifically indicated use manufacturer’s minimum documented embedment depth.
   1. Embedment depth is from surface of concrete or masonry. Anchor lengths and extent of threads shall account for embedment depth, connected elements, plate washers, washers, nut and appropriate stick thru.
D. Adhesive: Two component system complying with ASTM C-881 Type I and IV, Grade 3, Class A, B and C
E. Concrete Anchors:
   1. Anchors shall be tested in accordance with the most recent issue of ICC-ES AC308 including the following:
      a. All mandatory testing
      b. Shear and tension in cracked concrete.
      c. Critical and minimum edge distances and spacing
   2. Anchors design shall be in accordance with ACI 318 Appendix D as amended by the specific design provisions of ICC-ES AC308
3. Where not specifically indicated otherwise in contract documents or approved performance based shop drawings submittal anchors shall be as follows:

   a. HAS-E Standard or HAS SS rods, washers, and nuts of required finish with Hilti HIT RE 500-SD Adhesive Anchorage System for anchorage to concrete, ICC ESR-2322.

   b. Approved equal (See substitution requirements)

F. Masonry Anchors:

1. Anchors for masonry shall be tested in accordance with most recent edition of ICC-ES AC58 including the following

   a. All mandatory testing

   b. Seismic tension and shear

   c. Critical and minimum edge distances and spacing

2. Anchors design shall be in accordance with ACI 530

3. Where not specifically indicated otherwise in contract documents or approved performance based shop drawings submittal anchors shall be as follows:


   b. Approved equal (See substitution requirements)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance.

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

   2. Installation constitutes acceptance of existing conditions and responsibility of satisfactory performance.

3.2 INSTALLATION, GENERAL

A. Where manufacturer recommends the use of special tools for installation of anchors, such tools shall be used.

B. Match mark and drill, match drill or use other methods to ensure anchors are properly located.

C. Do not adjust anchor location after installation. Coordinate with EOR for modifications to connected element where anchors are incorrectly located.

D. Drill holes perpendicular to substrate surface.

E. Drill holes with rotary impact hammer drills using carbide-tipped bits or core drills using diamond core bits as indicated in the ICC-ESR report.
F. Drill bits and core bits shall be of diameters indicated in the ICC-ESR report.

G. All holes shall be cleaned with compressed air to remove all drilling dust and other deleterious substances.

H. Remove water from holes to attain a surface dry condition unless specifically permitted otherwise by ICC-ESR report.

I. Base Material Strength: Unless otherwise specified, do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength.

J. Embedded Items: Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Exercise care in coring or drilling to avoid damaging existing reinforcing or embedded items. Notify the Engineer if reinforcing steel or other embedded items are encountered during drilling. Take precautions as necessary to avoid damaging prestressing tendons, electrical and telecommunications conduit, and gas lines.

K. Perform anchor installation in strict accordance with manufacturer instructions and ICC-ES report.

L. Anchors shall be installed perpendicular to the substrate face within plus or minus 5 degrees unless specifically permitted otherwise by ICC-ESR report.

M. Install plate washers where specifically indicated or where connected elements have oversized holes.

N. Install a round washer under nuts. Round washers are in addition to plate washers where plate washers are required.

### 3.3 WEDGE ANCHORS

A. Protect threads from damage during anchor installation.

B. Set anchors to manufacturer’s recommended torque, using a torque wrench. Following attainment of 10% of the specified torque, 100% of the specified torque shall be reached within 7 or fewer complete turns of the nut. If the specified torque is not achieved within the required number of turns, the anchor shall be removed and replaced unless otherwise directed by the Engineer.

### 3.4 CARTRIDGE INJECTION ADHESIVE ANCHORS

A. Clean all holes per manufacturer instructions to remove loose material and drilling dust prior to installation of adhesive.

B. Inject adhesive into holes proceeding from the bottom of the hole and progressing toward the surface in such a manner as to avoid introduction of air pockets in the adhesive.

C. Follow manufacturer recommendations to ensure proper mixing of adhesive components.

D. Sufficient adhesive shall be injected in the hole to ensure that the annular gap is filled to the surface.
E. Remove excess adhesive from the surface.

F. Shim anchors with suitable device to center the anchor in the hole.

G. Do not disturb or load anchors before manufacturer specified cure time has elapsed.

H. Observe manufacturer recommendations with respect to installation temperatures.

3.5 FIELD QUALITY CONTROL

A. Testing and Inspection: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports in accordance with the schedule of special inspections.

B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.6 REPAIRS AND PROTECTION

A. Remove and replace misplaced or malfunctioning anchors. Fill empty anchor holes and patch failed anchor locations with high-strength non-shrink, nonmetallic grout. Anchors that fail to meet proof load or installation torque requirements shall be regarded as malfunctioning.

B. Galvanizing Repairs: Prepare and repair damaged galvanized coatings with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

C. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed metal framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION 050520
SECTION 051200
STRUCTURAL STEEL FRAMING

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. Structural steel.
   2. Bearing Plates

B. Products furnished, but not installed under this Section:
   1. Anchor rods and embed plates indicated to be built into masonry, installed under Division 04 Section "Unit Masonry".
   2. Anchor rods and embed plates indicated to be cast into cast-in-place concrete, installed under Division 03 Section "Cast-in-place-Concrete".

C. Related Sections:
   1. Division 01 Section "Quality Requirements" for independent testing agency procedures and administrative requirements.
   2. Division 05 Section "Post Installed Structural Anchors" for wedge, and adhesive anchors.

1.3 DEFINITIONS

A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges" and as modified herein.

B. Seismic-Load-Resisting System: Elements of structural-steel frame designated as "SLRS" or along grid lines designated as "SLRS" on Drawings, including columns, beams, and braces and their connections.

C. Heavy Sections: Rolled and built-up sections as follows:
   1. Shapes included in ASTM A 6/A 6M with flanges thicker than 1-1/2 inches.
   2. Welded built-up members with plates thicker than 2 inches.
   3. Column base plates thicker than 2 inches.

1.4 PERFORMANCE REQUIREMENTS

A. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator, including comprehensive engineering design by a qualified professional engineer, to withstand loads indicated and comply with other information and restrictions indicated.
   1. Select and complete connections using AISC 360.
2. Use LRFD; data are given at factored-load level.
3. All bolted connections for bracing members shall be designed and fabricated as slip critical connections to allow for field reaming of holes to address fit up issues.
4. All bolted connections for axial loaded members shall be designed and fabricated as slip critical connection to allow for field reaming of holes to address fit up issues.
5. The minimum number of bolts for any connection shall be two.
6. All steel to steel connections shall extend at least two thirds of the depth of the supported member being connected.

B. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator to withstand loads indicated and comply with other information and restrictions indicated.

1. Select and complete connections using schematic details indicated and AISC 360

1.5 SUBMITTALS

A. Product Data:

1. Nonshrink grout.
2. Post installed structural anchors: See specification section 050520

B. Shop Drawings: Show fabrication of structural-steel components.

1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
2. Include embedment drawings showing plan location and elevation of all embedded items.
3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.
5. Include scale drawings of all gusset plates.
6. Provide minimum 1/4" thick cap plates at the ends of all exposed HSS members, and at the top of all HSS columns.
7. Equally space filler beams or joists between columns and/or other dimensioned beams unless noted otherwise.
8. Identify members and connections of the seismic-load-resisting system.
9. Indicate locations and dimensions of protected zones.
10. Identify demand critical welds.

C. Delegated-Design Submittal:

1. For structural steel connections indicated to comply with design loads provide structural design data signed and sealed by the qualified professional engineer responsible for their preparation.
   a. Each individual calculation shall be clearly labeled in coordination with erection drawings such that it identifies the member(s) that the connection applies to.

2. Professional Engineer's Statement: A written statement indicating that the for fabrication shop drawings incorporate all the connection requirements included in the calculations submitted for approval inclusive of any corrections required in response to shop drawing review comments. The statement shall be prepared by, and signed and sealed by the professional engineer that completed the calculations submittal.
D. Slip Critical Bolt Installation Statement: A written statement indicating the means and equipment to be used to achieve the tightening requirements for clip critical bolt installation. Statement shall identify the specific pre-installation required by the special inspections and acknowledge that this testing must be coordinated and completed prior to commencement of erection.

E. As-built anchor rod and embed survey

F. Welding certificates
   1. Submit welding certificates for all individuals expected to be performing field welding

G. Welding Procedure Specifications (WPS's) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each field welded joint whether prequalified or qualified by testing, including the following:
   1. Power source (constant current or constant voltage).
   2. Electrode manufacturer and trade name, for demand critical welds.

H. Qualification Data:
   1. Fabricator
   2. Erector
   3. Post Installed Structural Anchor Installer

I. Research/Evaluation Reports:
   1. Post Installed Structural Anchors: See specification section 050520

J. Product Test Reports: For the following:

K. Minutes of preinstallation conference.

1.6 QUALITY ASSURANCE

A. Engineering Responsibility: Preparation of Shop Drawings, design calculations, and other structural data by a qualified professional engineer.

B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

C. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category SBD (Conventional Steel Building Structures)

D. Fabricator Responsibility
   1. The structural steel fabricator shall be responsible for enlisting the Steel Joist fabricator as a direct subcontractor.
   2. The structural steel fabricator shall be responsible for enlisting the Cold Formed Steel Purlin fabricator as a direct subcontractor.
   3. The structural steel fabricator shall be responsible for enlisting the steel erector as a direct subcontractor.
E. Structural Steel and Architectural Structural Steel Installer Qualifications: The erector shall be experienced in installing structural steel equal in material, design and scope to the structural steel required for this project.

F. Post Installed Structural Anchor Installer: See specification section 050520 for requirements

G. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
   1. Welders and welding operators performing work on bottom-flange, demand-critical welds shall pass the supplemental welder qualification testing, as required by AWS D1.8. FCAW-S and FCAW-G shall be considered separate processes for welding personnel qualification.

H. Comply with applicable provisions of the following specifications and documents:
   1. AISC 303.
   2. AISC 341 and AISC 341s1.
   3. AISC 360.
   4. RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

I. Preinstallation Conference: Conduct conference at Project site.
   1. Review special inspection and testing and inspecting agency procedures for field quality control.
   2. Review items requiring special inspection and testing that must be tested and inspected prior to installation of decking, concrete slabs, or other items that might limit access to the item to be tested or inspected
   3. Review welding requirements
   4. Review electrode storage requirements
   5. Review pre-construction bolt installation verification
   6. Review bolt installation calibration requirements

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
   1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.

B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
   1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
   2. Clean and relubricate bolts and nuts that become dry or rusty before use.
   3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

1.8 COORDINATION
A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

A. W-Shapes and Tees: ASTM A 992.

B. Channels, Angles-Shapes:
   1. ASTM A 36 unless noted otherwise
   2. ASTM A 572/A 572M, Grade 50 where indicated.

C. Plate and Bar:
   1. ASTM A 36 unless noted otherwise
   2. ASTM A 572/A 572M, Grade 50 where indicated.

D. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
   1. Square or Rectangular HSS: Fy=46 KSI
   2. Round HSS: Fy=42 KSI

E. Welding Electrodes: Comply with AWS requirements.
   1. All weld filler metal shall meet the requirements of H16 as tested in accordance with AWS A4.3 per AISC 341-05 Appendix W.
   2. All weld filler metal shall have a minimum CVN toughness of 20 ft-lbs at 0 degrees Fahrenheit.
   3. Demand Critical Welds: All weld filler metal shall have a minimum CVN toughness of 20 ft-lbs at minus 10 degrees Fahrenheit per AWS and 40 ft-lbs at 70 degrees Fahrenheit per AISC 341-05 Appendix X.

2.2 BOLTS, CONNECTORS, AND ANCHORS

A. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy hex steel structural bolts; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.
   1. Finish:
      a. Plain for primed or painted steel
   2. Direct-Tension Indicators: ASTM F 959, Type 325 compressible-washer type.
      a. Finish:
         1) Plain for unprimed steel or steel receiving standard shop primer.
2) Mechanically deposited zinc coating, ASTM B 695, Class 50 for hot galvanized steel or steel to receive high performance top coating.

B. High-Strength Bolts, Nuts, and Washers:  ASTM A 490 (ASTM A 490M), Type 1, heavy hex steel structural bolts or tension-control, bolt-nut-washer assemblies with splined ends; heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.

1. Finish:
   a. Plain for primed or painted steel

2. Direct-Tension Indicators:  ASTM F 959, Type 490, compressible-washer type.
   a. Finish:
      1) Plain for unprimed steel or steel receiving standard shop primer.
      2) Mechanically deposited zinc coating, ASTM B 695, Class 50 for hot galvanized steel or steel to receive high performance top coating.

C. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies:  ASTM F 1852, Type 1, heavy hex or round head steel structural bolts with splined ends; ASTM A 563 heavy hex carbon-steel nuts; and ASTM F 436 hardened carbon-steel washers.

1. Finish:
   1) Plain for unprimed steel or steel receiving standard shop primer.
   2) Mechanically deposited zinc coating, ASTM B 695, Class 50 for hot galvanized steel or steel to receive high performance top coating.

D. Post Installed Structural Anchors: See specification section 055020 for products

2.3 PAINT
A. Galvanizing Repair Paint:  ASTM A 780.

2.4 NONSHRINK GROUT
A. Nonmetallic, Shrinkage-Resistant Grout:  ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 FABRICATION
A. Structural Steel:  Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.

1. Camber structural-steel members where indicated.
2. Fabricate beams with rolling camber up.
3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
4. Mark and match-mark materials for field assembly.
5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
   1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.

C. Bolt Holes: Cut, drill, mechanically thermal cut, or punch standard bolt holes perpendicular to metal surfaces.

D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.

E. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.
   1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not enlarge holes by burning.
   2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
   3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
   1. Joint Type:
      a. Snug tightened unless noted otherwise
      b. Slip critical as indicated and for all members of the SLRS.

B. Weld Connections: Comply with AWS D1.1/D1.1M and AWS D1.8/D1.8M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
   1. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances in AISC 303 for mill material.
   2. Remove backing bars and runoff tabs, back gouge, and grind steel smooth.

2.7 CLEANING Cleaning:
   1. Clean and prepare steel surfaces that are to remain unprimed according to SSPC-SP 2, "Hand Tool Cleaning."
   2. Clean and prepare steel surfaces that are to receive standard primer according to SSPC-SP 3, "Power Tool Cleaning."
   3. Clean and prepare steel surfaces that are to receive special primer according to the associated painting specification. When not specifically noted the minimum cleaning shall be SSPC-SP 6, "Commercial Blast Cleaning."

2.8 GALVANIZING

A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.
   1. Fill vent and drain holes that will be exposed in the finished Work unless they will function as weep holes, by plugging with zinc solder and filing off smooth.
2. Galvanize loose and hung lintels, shelf angles, all exposed exterior steel and all steel located in exterior masonry walls unless noted otherwise. Coordinate with drawings and specifications.

   a. Galvanized elements to be top coated shall not be quenched, and shall be swept blast to ensure proper adhesion of top coats.

2.9 SOURCE QUALITY CONTROL

A. Testing Agency: Owner will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.

   1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections

B. All source quality control shall be completed by the fabricator’s personnel unless noted otherwise and shall be in accordance with the certified fabricator’s quality control manual, AISC Code of Standard Practice, and AWS D1.1.

C. Testing Agency: Fabricator will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports as required.

D. Special inspections are not required at the source of fabrication based on the requirement for an AISC certified fabricator.

E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

F. Bolted Connections: Shop-bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

G. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1/D1.1M.

H. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1/D1.1M for stud welding and as follows:

   1. Bend tests will be performed if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
   2. Tests will be conducted on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.

   1. Prepare a certified as-built survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.

B. Proceed with installation only after unsatisfactory conditions have been corrected.
3.2 PREPARATION

A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION

A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.


1. Where ungrouted anchor rod sleeves are required caulk the annular surface between the sleeve and the anchor rod to prevent grout from entering the sleeves.
2. Set plates for structural members on wedges, shims, or setting nuts as required.
3. Weld plate washers to top of baseplate as indicated.
4. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
5. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
   a. Use grout forms and grout surcharging as required to ensure that grout completely fills the space below bearing or base plate, and no voids remain.
6. Paint base plates, anchor bolts and sections of columns below grade and below finished floor with Coal Tar Mastic Paint.

C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.

E. Splice members only where indicated.

F. Remove erection bolts on welded, architecturally exposed structural steel; fill holes with plug welds; and grind smooth at exposed surfaces.

G. Do not use thermal cutting during erection unless approved by Architect. Finish thermally cut sections within smoothness limits in AWS D1.1/D1.1M.

H. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
1. For slip critical connections enlarge hole to next standard hole size and provide next standard bolt size.

I. Pour stops and edge angles: Pour stops and edge angles shall be field installed based on global building control lines to ensure overall building geometry is maintained.
   1. Do not locate based on local member geometry.

3.4 FIELD CONNECTIONS

A. High-Strength Bolts: Install high-strength bolts according to RCSC’s “Specification for Structural Joints Using ASTM A 325 or A 490 Bolts” for type of bolt and type of joint specified.
   1. Joint Type: As indicated on shop drawings.

B. Finger Tight Bolts: All joints noted as finger tight shall be hand tightened as required to install elements. Do not tighten by mechanical means
   1. Provide jam nuts to prevent nut from backing off.
   2. After initial tightening turn nut and jam nut in opposite direction to bind them against one another.

C. Weld Connections: Comply with AWS D1.1/D1.1M and AWS D1.8/D1.8M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
   1. Comply with AISC 303 and AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.
   2. Remove backing bars and/or runoff tabs at all exposed locations and at all members and connections of the SLRS, back gouge, and grind steel smooth.
   3. Assemble and weld built-up sections by methods that will maintain true alignment of axes without exceeding tolerances in AISC’s “Code of Standard Practice for Steel Buildings and Bridges” for mill material.

D. Post Installed Structural Anchors: See specification section 055020 for products

3.5 FIELD PAINTING

A. Column bases: Paint column bases below grade and/or below finished floor with coal tar mastic paint.

B. Field painting of structural steel for finished appearance in exposed conditions or for high performance coating systems is specified in Division 09 painting sections.

3.6 FIELD QUALITY CONTROL

A. Testing and Inspection: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports in accordance with the schedule of special inspections.

B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
3.7 REPAIRS AND PROTECTION

A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.

B. Touchup Painting: At all exterior and exposed interior conditions promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted joists, bearing plates, abutting structural steel, and accessories.

1. Clean and prepare surfaces by hand-tool cleaning, SSPC-SP 2, or power-tool cleaning, SSPC-SP 3.
2. Apply a primer of same type as shop primer used on adjacent surfaces. Coordinate with Part 2 priming requirements

END OF SECTION 051200
SECTION 055300
METAL GRATINGS

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. Metal bar gratings.

B. Related Sections:
   1. Division 05 Section "Structural Steel Framing" for structural-steel framing system components.
   2. Division 05 Section "Pipe and Tube Railings" for metal pipe and tube handrails and railings.

1.3 PERFORMANCE REQUIREMENTS
A. Delegated Design: Design gratings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. Structural Performance: Gratings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.
   1. Walkways and Elevated Platforms Other Than Exits: Uniform load of 150 lb/sq. ft. (2.87 kN/sq. m).
   2. Limit deflection to L/360 or 1/4 inch (6.4 mm), whichever is less.

C. Seismic Performance: Provide gratings capable of withstanding the effects of earthquake motions determined according to ASCE/SEI 7.

1.4 ACTION SUBMITTALS
A. Product Data: For the following:
   1. Formed-metal plank gratings.
   2. Clips and anchorage devices for gratings.
B. Shop Drawings: Include plans, sections, details, and attachments to other work.

C. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified professional engineer.

B. Mill Certificates: Signed by manufacturers of stainless-steel sheet certifying that products furnished comply with requirements.

C. Welding certificates.

D. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

1.6 QUALITY ASSURANCE

A. Metal Bar Grating Standards: Comply with NAAMM MBG 531, "Metal Bar Grating Manual" and NAAMM MBG 532, "Heavy-Duty Metal Bar Grating Manual."

B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

C. Welding Qualifications: Qualify procedures and personnel according to the following:
   1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
   2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
   4. AWS D1.6, "Structural Welding Code - Stainless Steel."

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with gratings by field measurements before fabrication.

1.8 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of anchorages for gratings, grating frames, and supports. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
PART 2 - PRODUCTS

2.1 FERROUS METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Steel Bars for Bar Gratings: ASTM A 36/A 36M or steel strip, ASTM A 1011/A 1011M or ASTM A 1018/A 1018M.

C. Wire Rod for Bar Grating Crossbars: ASTM A 510 (ASTM A 510M).

D. Uncoated Steel Sheet: ASTM A 1011/A 1011M, structural steel, Grade 30 (Grade 205).

E. Galvanized-Steel Sheet: ASTM A 653/A 653M, structural quality, Grade 33 (Grade 230), with G90 (Z275) coating.

2.2 FASTENERS

A. General: Unless otherwise indicated, provide [Type 304] [Type 316] stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

1. Provide stainless-steel fasteners for fastening aluminum.

2. Provide stainless steel fasteners for fastening stainless steel.

B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with hex nuts, ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.

C. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.

1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.


F. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.
2.3 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy that is welded.

B. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work:

C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.4 FABRICATION

A. Shop Assembly: Fabricate grating sections in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch material cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form from materials of size, thickness, and shapes indicated, but not less than that needed to support indicated loads.

D. Fit exposed connections accurately together to form hairline joints.

E. Welding: Comply with AWS recommendations and the following:
   1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   2. Obtain fusion without undercut or overlap.
   3. Remove welding flux immediately.

F. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space the anchoring devices to secure gratings, frames, and supports rigidly in place and to support indicated loads.
   1. Fabricate toeplates for attaching in the field.
   2. Toeplate Height: 4 inches (100 mm) unless otherwise indicated.

2.5 METAL BAR GRATINGS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work:
1. Alabama Metal Industries Corporation; a Gibraltar Industries company.
2. All American Grating.
5. Fisher & Ludlow; Division of Harris Steel Limited.
7. Grupo Metelmex, S.A. de C.V.
8. IKG Industries; a division of HarSCO Corporation.
10. Ohio Gratings, Inc.
11. Seidelhuber Metal Products; Division of Brodhead Steel Products.

B. Welded Steel Grating:
1. Bearing Bar Spacing: 15/16 inch (24 mm) o.c.
2. Bearing Bar Depth: 1 inch (25 mm).
3. Bearing Bar Thickness: As required to comply with structural performance requirements.
4. Crossbar Spacing: 4 inches (102 mm) o.c.
5. Grating Mark: As indicated.
7. Steel Finish: Hot-dip galvanized with a coating weight of not less than 1.8 oz./sq. ft. (550 g/sq. m) of coated surface.

C. Pressure-Locked Steel Grating: Fabricated by pressing rectangular flush-top crossbars into slotted bearing bars.
1. Bearing Bar Spacing: 15/16 inch (24 mm) o.c.
2. Bearing Bar Depth: 1 inch (25 mm).
3. Bearing Bar Thickness: As required to comply with structural performance requirements Insert thickness.
4. Crossbar Spacing: 4 inches (102 mm) o.c.
5. Grating Mark: As indicated.
7. Steel Finish: Hot-dip galvanized with a coating weight of not less than 1.8 oz./sq. ft. (550 g/sq. m) of coated surface.

D. Removable Grating Sections: Fabricate with banding bars attached by welding to entire perimeter of each section. Include anchors and fasteners of type indicated or, if not indicated, as recommended by manufacturer for attaching to supports.
1. Provide no fewer than four weld lugs for each heavy-duty grating section, with each lug shop welded to two bearing bars.
2. Provide no fewer than four saddle clips for each grating section composed of rectangular bearing bars 3/16 inch (4.8 mm) or less in thickness and spaced 15/16 inch (24 mm) or more o.c., with each clip designed and fabricated to fit over two bearing bars.
3. Provide no fewer than four weld lugs for each grating section composed of rectangular bearing bars 3/16 inch (4.8 mm) or less in thickness and spaced less than 15/16 inch (24 mm) o.c., with each lug shop welded to three or more bearing bars. Interrupt intermediate bearing bars as necessary for fasteners securing grating to supports.
4. Provide no fewer than four flange blocks for each section of aluminum I-bar grating, with block designed to fit over lower flange of I-shaped bearing bars.
5. Furnish threaded bolts with nuts and washers for securing grating to supports.
6. Furnish self-drilling fasteners with washers for securing grating to supports.
7. Furnish galvanized malleable-iron flange clamp with galvanized bolt for securing grating to supports. Furnish as a system designed to be installed from above grating by one person.

   a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      1) Kee Industrial Products, Inc.; Grating Clip.
      2) Lindapter North America, Inc.; Grate-Fast.

E. Fabricate cutouts in grating sections for penetrations indicated. Arrange cutouts to permit grating removal without disturbing items penetrating gratings.

   1. Edge-band openings in grating that interrupt four or more bearing bars with bars of same size and material as bearing bars.

F. Do not notch bearing bars at supports to maintain elevation.

2.6 GRATING FRAMES AND SUPPORTS

A. Frames and Supports for Metal Gratings: Fabricate from metal shapes, plates, and bars of welded construction to sizes, shapes, and profiles indicated and as necessary to receive gratings. Miter and weld connections for perimeter angle frames. Cut, drill, and tap units to receive hardware and similar items.

   1. Unless otherwise indicated, fabricate from same basic metal as gratings.
   2. Equip units indicated to be cast into concrete or built into masonry with integrally welded anchors. Unless otherwise indicated, space anchors 24 inches (600 mm) o.c. and provide minimum anchor units in the form of steel straps 1- inches (32 mm) wide by 1/4 inch (6 mm) thick by 8 inches (200 mm) long.

B. Galvanize steel frames and supports in the following locations:

   1. Exterior.
   2. Interior, where indicated.

2.7 STEEL FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish gratings, frames, and supports after assembly.

C. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.
1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing gratings to in-place construction. Include threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing gratings. Set units accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete or masonry.

D. Fit exposed connections accurately together to form hairline joints.

   1. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade the surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

E. Attach toeplates to gratings by welding at locations indicated.

F. Field Welding: Comply with the following requirements:

   1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   2. Obtain fusion without undercut or overlap.
   3. Remove welding flux immediately.

G. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

3.2 INSTALLING METAL BAR GRATINGS

A. General: Install gratings to comply with recommendations of referenced metal bar grating standards that apply to grating types and bar sizes indicated, including installation clearances and standard anchoring details.

B. Attach removable units to supporting members with type and size of clips and fasteners indicated or, if not indicated, as recommended by grating manufacturer for type of installation conditions shown.
C. Attach nonremovable units to supporting members by welding where both materials are same; otherwise, fasten by bolting as indicated above.

3.3 INSTALLING EXPANDED-METAL GRATINGS

A. Attach aluminum units to steel supporting members by bolting at 6-inch (150-mm) intervals.

B. Butt edges parallel to long direction of diamond-shaped openings and weld at every second bond point. Place individual grating sections so diamonds of one piece are aligned with those of adjacent sections.

3.4 ADJUSTING AND CLEANING

A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The following apply to the work under this Section:

1. Section 26 05 00, Electrical, General
2. Section 26 20 00, Interior Wiring Systems

1.2 SCOPE

A. Provide all labor, material and operation required for removal of existing electrical systems as indicated.

B. Bidders shall visit the site of the work prior to bidding and shall include in bid all work required to provide new work and to modify existing work as required to continue in operation.

C. Contractor shall examine demolition and new work plans for all trades and include in bid all rework and/or relocation of existing raceway, junction boxes, panelboards, safety switches, devices, wiring systems and all other related electrical equipment as required to accommodate new construction.

D. Electrical demolition work generally includes:

1. Existing panelboards, safety switches and other electrical equipment as indicated;
2. Exposed conduits, surface metal raceways and exposed outlet boxes and devices as indicated;
3. Conductors, exposed and concealed as indicated;
4. Existing wiring devices as indicated. Where new wiring devices are shown in existing locations, the Contractor may re-use the existing opening and outlet box for new device;
5. Any existing abandoned wiring systems in ceiling space, crawl space, attic or similar cavities of the work areas of the building, including wire, raceways, boxes and supports as indicated;
6. Existing generator, fuel oil day tank, and ATS;
7. Where indicated on drawings, existing raceways may be reused for new circuits. Contractor shall mandrel brush and swab existing feeder conduits prior to pulling new conductors.

E. Include in bid all work required for temporary wiring and associated electrical work required to maintain existing systems in service during demolition phase.

F. All interruptions in electrical systems (power, lighting, communication, fire alarm and other systems) as required for this work shall be coordinated with and approved by Owner prior to
performing work. Notice shall be provided to Owner in writing a minimum of 48 hours in advance, but not less than the time specified in other portions of Contract Documents.

G. The intent of this specification is to obtain removal of the existing electrical system to the extent required to enable the Owner to identify, service, repair or modify the new wiring system efficiently and safely.

1.3 STANDARDS

A. Demolition work shall comply with ANSI A10.6, NFPA 241, OSHA, AHERA and all applicable local, state and federal standards and guidelines.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities in work area have been disconnected and capped as required.

B. Survey existing conditions and correlate with demolition and new work indicated in Contract Documents to determine extent of demolition required.

C. When unanticipated mechanical, electrical, environmental or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Provide prompt written notice to Engineer of any conflicts.

3.2 DEMOLITION

A. Owner shall retain first right of refusal on all electrical equipment and wiring being demolished. Prior to beginning demolition work, contractor shall walk through demolition area with Owner’s representative and identify items to be removed and turned over to Owner. Contractor shall carefully remove, protect and store items to be turned over to Owner and deliver to Owner at location on site as directed by Owner.

B. Maintain services and systems indicated to remain and protect them against damage during demolition process.

C. All devices indicated as to remain or to be relocated shall be protected against damage during demolition process and cleaned prior to being restored into service.

D. Contractor shall patch all locations resulting from demolition at which new work is not installed, as required under Section 26 05 00, Electrical, General.

E. Provide temporary barricades, dust barriers and other protection required to prevent injury to people and damage to building contents, adjacent area of building and facilities to remain.

F. Maintain protected egress and access at all times. Do not close or obstruct roadways or sidewalks without permission from Owner.

G. Conduct demolition to minimize interference with Owner’s use of site.

H. Conduct operations with minimum interference to public or private access.
3.3 DISPOSAL OF DEMOLISHED MATERIALS

A. Demolished material shall be promptly removed from site as work progresses.

B. Remove and transport materials in a manner that will prevent contamination or damage to adjacent surfaces and areas.

C. Burning of demolished materials will not be permitted on site.

D. All materials shall be properly and legally disposed of. Contractor is responsible for all handling, storage, transportation and disposal fees.

3.4 CLEANING

A. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations.

B. Return adjacent areas to condition existing before demolition operations began.

END OF SECTION 26 05 10
SECTION 26 20 00
INTERIOR WIRING SYSTEMS

PART 1 - GENERAL
1.1 RELATED DOCUMENTS
   A. Section 26 05 00, Electrical, General, applies to the work under this section.

1.2 SCOPE
   A. Provide interior wiring systems complete and ready for operation, as indicated, specified herein and in compliance with applicable codes and standards.

PART 2 - PRODUCTS
2.1 MANUFACTURERS
   A. Materials of like type shall be manufactured by the same company.
   B. Panelboards, circuit breakers, safety switches, transformers, and the like: General Electric, Siemens-ITE, Square D, Cutler-Hammer, or approved equal.
   C. Fittings, Condulets, Boxes and the like: Steel City, Thomas and Betts, O-Z Electrical Manufacturing Company, Appleton, Efcor, Crouse-Hinds, Garvin Industries, or approved equal.
   D. Conductors and Cables: Alpha Wire Company, Belden, Cerro Wire, Southwire Company, General Cable or approved equal.
   E. Cable Markers: 3M Company, E-Z Code, Brady, or approved equal.
   F. Connectors, Lugs and Terminals and the like: 3M Company, Ideal, Thomas and Betts, O-Z Electrical Manufacturing Company, or approved equal.
   G. Wiring Devices and the like: Best Specification Grade; Arrow Hart/Cooper, Hubbell, Legrand/P&S, Leviton, or approved equal.
   H. Fuses: Bussman, Gould, Littelfuse, or approved equal.
   I. Grounding Devices and the like: Cadweld, Thomas and Betts, Appleton, Erico, O-Z Electrical Manufacturing Company, or approved equal.
   J. AC and MC Cable: Only permitted for fixture “whips”, maximum 6’ length.
   K. AC Cable: US4, UL514B, NEC320; AFC Cable Systems, Inc. or approved equal.
   L. MC Cable: UL 1569, NEC 330; AFC Cable Systems, Inc. or approved equal.
   M. AC and MC Cable Connectors: Appleton, OZ-Gedney, T&B, or approved equal, specifically manufactured for cable type, size, and number of conductors at each location.
2.2 CONDUIT AND FITTINGS

A. Rigid Steel Conduit (Zinc-Coated): ANSI C80.1.

B. Rigid Nonmetallic Conduit: PVC Type EPC-40 in accordance with NEMA TC2. Not Permitted.

C. Intermediate Metal Conduit (IMC): UL 1242, zinc-coated steel only.

D. Electrical Metallic Tubing (EMT): ANSI C80.3.

E. Flexible Metal Conduit: UL 1.
   1. Liquid-Tight Flexible Metal Conduit (Steel): UL 360.

F. Fittings for Metal Conduit, Electrical Metallic Tubing, and Flexible Metal Conduit: UL 514. All ferrous fittings shall be cadmium- or zinc-coated in accordance with UL 514.
   1. Fittings for rigid metal conduit and IMC shall be threaded type. Split couplings are not acceptable.
   2. Fittings for electrical metallic tubing (EMT) shall be the compression type.


H. Electrical Nonmetallic Tubing (ENT): Not permitted.

2.3 OUTLET BOXES AND COVERS

A. UL 514, cadmium- or zinc-coated if of ferrous metal.

B. Provide outlet boxes of size and type required by NEC, and in no case smaller than the following:
   1. Boxes for lighting fixtures: 4" octagonal x 1-1/2" deep, or 4" x 4" x 1-1/2"
   2. Boxes for Switches and Receptacles: 3" x 2" x 2-3/4" or 4" x 4" x 1-1/2" with plaster ring to suit construction
   3. Telephone boxes: 4" x 4" x 2-1/4"
   4. Communications Systems Boxes: 4" x 4" x 2-1/4"

C. Provide suitable extensions, rings or subcovers set to come flush with the finished surface in which boxes are mounted.

D. Boxes for exposed raceway shall be threaded-hub cast metal, sizes as specified above.

2.4 CABINETS, JUNCTION BOXES, AND PULL BOXES

A. UL 50, hot-dip zinc-coated, code gauge sheet steel, screw cover unless indicated otherwise.

2.5 WIRES AND CABLES

A. Wires and cables shall meet the applicable requirements of NFPA 70 and UL for the type of insulation, jacket, and conductor specified or indicated. All wire and cable shall be new, with
size, grade of insulation, voltage and manufacturer’s name permanently imprinted on outer covering at regular intervals, and delivered to the job site in complete coils and reels.

**B. Conductors:** Conductors No. 10 AWG and smaller shall be solid, and those No. 8 AWG and larger shall be stranded. Unless indicated otherwise, conductor sizes shown are based on copper. All conductors shall be copper.

**C. Minimum Conductor Sizes:** Minimum size for branch circuits shall be No. 12 AWG; for Class 1 remote-control and signal circuits, No. 14 AWG; and for Class 2 low-energy remote-control and signal circuits, No. 16 AWG. All 120 v. branch circuits exceeding 100’ in length and all 277 v. branch circuits exceeding 250’ in length shall be No. 10 AWG, minimum.

**D. Color Coding:** Provide for all service, feeder, branch, control and signaling circuit conductors. Color shall be green for grounding conductors, and white for neutrals, except where neutrals of more than one system are installed in same raceway or box, the neutral of the higher-voltage system shall be white with a yellow stripe, or shall be gray. The color of the ungrounded conductors in different voltage systems shall be as follows:

1. **120/208 volt, 3-phase:**
   - Phase A - black
   - Phase B - red
   - Phase C - blue

2. **277/480 volt, 3-phase:**
   - Phase A - brown
   - Phase B - orange
   - Phase C - yellow

3. **120/240 volt, single phase:** red and black.

4. On 3-phase, 4-wire delta systems, the high leg shall be orange as required by NFPA 70 and shall be located in enclosures as required by applicable codes.

**E. Color coding for fire alarm conductors** shall be the manufacturer’s standard and shall be consistent throughout the system. Include color coding key with record data.

**F. Insulation:** Unless specified or indicated otherwise, or required to be otherwise by NFPA 70, all power and lighting wires shall be 600-volt, Type THHN, THWN, or XHHW; remote-control and signal circuits shall be Type TW, THHN, TF, THWN or XHHW.

**G. Bonding Conductors:** ASTM B 1, solid bare copper wire for sizes No. 8 AWG and smaller; ASTM B 8, Class B, stranded bare copper wire for sizes No. 6 AWG and larger.

**H. Manufactured Wiring Systems (Interior Lighting Circuits Only):** UL 183.

**I. Nonmetallic-Sheathed Cable:** Not permitted.

### 2.6 ELECTRICAL CONNECTIONS

**A. Comply with NEC Article 110-14.**

**B. All termination devices, such as connectors, splicing devices, equipment terminals, device terminals and the like shall be rated and listed for operation at 75 degrees C.**
2.7 SPLICES AND TERMINATION COMPONENTS

A. UL 486A and UL 486B, as applicable for wire connectors, and UL 510 for insulating tapes. Connectors for wires No. 10 AWG and smaller shall be insulated pressure-type in accordance with UL 486A or UL 486C (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

B. Splices and/or taps for #8 and larger conductors shall be crimp type by T&B, Burndy, Oz, or approved equal; or Ilsco KUP-L-Tap®, ClearTap, or approved equal.

2.8 DEVICE PLATES

A. Provide UL listed, one-piece device plates for outlets and fittings to suit the devices installed. Plates on unfinished walls and on fittings shall be of zinc-coated sheet steel or cast metal having round or beveled edges. Plates on finished walls shall be urea or phenolic, minimum 0.10 inch wall thickness, and shall be the same color as the receptacle or toggle switch with which it is mounted, or shall be satin finish stainless steel or brushed-finish aluminum, minimum of 0.03 inch thick as directed by Architect. Screws shall be machine type with countersunk heads in a color to match the finish of the plate. The use of sectional type device plated will not be permitted. Plates installed in wet locations shall be gasketed. Device plates for telephone outlets shall be as specified in Section 16740. All plates shall be oversize type.

2.9 SWITCHES

A. Toggle Switches: Fed. Spec. W-S-896, totally enclosed with bodies of thermosetting plastic and a mounting strap. Handles shall be white, gray, brown or ivory. Wiring terminals shall be of the screw type, side wired. Switches shall be rated quiet-type ac only, 120/277 volts, with the current rating and number of poles indicated. Colors shall be as directed by Architect.

B. Disconnect Switches: NEMA KS1. Provide heavy duty, fusible type. General duty and non-fusible switches are not permitted.

1. Operating mechanisms shall be of the quick-make, quick-break type, with arc-suppressing characteristics.

2. Enclosures shall be NEMA 1 indoors and NEMA 3R outdoors and in wet locations unless otherwise indicated, equipped with cover interlock and provisions for padlocking operating handle in OFF position. Safety switches shall be by the same manufacturer as panelboards.

2.10 RECEPTACLES

A. NEMA WD1, heavy-duty, grounding type. Ratings and configurations shall be as indicated. Bodies shall be of white, gray, brown or ivory thermosetting plastic supported on a metal mounting strap. Wiring terminals shall be of the screw type, side wired. Connect grounding pole to the mounting strap. Colors shall be as directed by Architect with the exception of devices connected to the emergency power system, which shall be red in color.

B. NEMA WD1, heavy-duty, grounding type. Ratings and configurations shall be as indicated. Bodies shall be orange thermosetting plastic supported on a metal mounting strap. Wiring terminals shall be of the screw type, side wired. Connect grounding pole to the mounting strap.

C. Weatherproof Receptacles: In all damp or wet locations, provide in a cast metal box with a gasketed, weatherproof, cast-metal cover plate and a gasketed cap over each receptacle opening. The cap(s) shall be provided with a spring-hinged flap. Cover shall be "in use" type.
where required by local codes. Receptacle shall be UL listed for use in “damp location” or “wet location” to suit installation location.

D. Ground Fault Circuit Interrupter Receptacles: UL 943, and shall be duplex type for mounting in a standard outlet box. The device shall be capable of detecting a current leak of 5 milliamperes.

E. Receptacles shall be by same manufacturer as toggle switches, as specified above.

F. Install grounding type receptacles with the grounding terminal at the top.

2.11 PANELBOARDS

A. UL 67 and UL 50. Panelboards for use as service disconnecting means shall additionally conform to UL 869. Panelboards shall be circuit breaker equipped unless indicated otherwise. Design shall be such that any individual breaker can be removed without disturbing adjacent units or without loosening or removing supplemental insulation supplied as a means of obtaining clearances as required by UL. Where “space only” is indicated, make provisions for the future installation of a breaker sized as indicated. All panelboard locks included in the project shall be keyed alike. Directories shall be typed to indicate load served by each circuit and mounted in a holder behind transparent protective covering. Directory listing for each breaker shall list the type load served (lighting, receptacles, etc.) and location of load (room name, room number, etc.)

B. Panelboard Buses: Support bus bars on bases independently of the circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or tapping. Provide an isolated neutral bus in each panel for connection of circuit neutral conductors. Provide a separate ground bus marked with a green stripe along its front and bonded to the steel cabinet for connecting grounding conductors.

C. Circuit Breakers: Fed. Spec. W-C-375 thermal magnetic type with interrupting capacity as indicated or of 22,000 amperes symmetrical minimum. Breaker terminals shall be UL listed as suitable for the type of conductor provided. Plug-in circuit breakers shall be provided only where indicated in drawings.

1. Multi-pole Breakers: Provide common-trip type with a single operating handle. Breaker design shall be such that an overload in one pole automatically causes all poles to open. Maintain phase sequence throughout each panel so that any three adjacent breaker poles are connected to Phases A, B, and C, respectively.

2. Circuit Breaker with Ground-Fault Circuit Interrupter: UL 1053 and NFPA 70. Provide with “push-to-test” button, visible indication of tripped condition, and ability to detect a current imbalance of approximately 5 milliamperes.


4. Breakers Used as Switches for 120-Volt Fluorescent Fixtures: Breakers shall be marked “SWD” in accordance with UL 489.

5. Breakers used to serve refrigeration and air conditioning compressors shall be type “HACR.”
2.12 FUSES
A. Provide a complete set of fuses for each fusible device provided. Time-current characteristics curves of fuses serving motors or connected in series with circuit breakers or other circuit protective devices shall be coordinated for proper operation; submit coordination data for approval. Fuses shall have a voltage rating not less than the circuit voltage.

B. Cartridge Fuses, Current-Limiting Type (Class R): UL 198E, time-delay type. Associated fuseholders shall be Class R only.

C. Cartridge Fuses, Current-Limiting Type (Classes J and L): UL 198C, Class J for 0 to 600 amps and Class L for 601 to 6000 amps.

2.13 TRANSFORMERS
A. NEMA ST20, TP-1 compliant, energy efficient, general-purpose, dry-type, self-cooled, ventilated. Provide nonventilated or sealed where indicated. Provide transformers in a NEMA 1 enclosure indoors and a NEMA 3R enclosure outdoors. Transformer shall have 220 degrees C insulation system with a temperature rise not exceeding 115 degrees C under full rated load in a maximum ambient of 40 degrees C. Transformer shall be capable of carrying continuously 115 percent of the nameplate kVA without exceeding the insulation rating. Transformers shall be the quiet type with an average sound level of at least 3 decibels lower than NEMA standard level for the transformer size indicated.

B. Wiring compartment shall be front accessible and lugs shall be provided for cable sizes used. Enclosures shall be dripproof and adequately ventilated to maintain UL and NEMA temperature limits.

C. KVA ratings shall be as scheduled in drawings.

D. Transformers shall be three-phase, 60 Hz, two-winding type, with 480 volt Delta primary winding and 208Y/120 volt WYE secondary winding with grounded neutral. Primary windings shall be provided with taps, 2-2-1/2% FCAN and 2-2-1/2% FCBN.

PART 3 - EXECUTION
3.1 RACEWAYS
A. Provide raceways for all conductors and cables. See drawings for raceway types approved for various locations and applications in the project.

B. Provide flexible metal conduit for connection to rotating or vibrating equipment. In all potentially wet locations, provide waterproof flexible conduit. In no case shall length of flexible conduit exceed 3 feet, except for transformers, where length shall not exceed 2 feet. Support in accordance with NEC and as approved by Engineer.

C. Contractor shall size pull and junction boxes. Comply with requirements for dimensions and conduit spacings as defined in the NEC Article 314.

D. Raceways shall be continuous between outlets and enclosures. Bond raceway system as described in drawings and grounding specifications, and make all connections wrench tight for electrical continuity. Connect raceways at boxes and enclosures using locknuts and bushings. Provide insulating bushings with grounding lug on all raceways one inch and larger.

E. Install raceways generally as follows:
1. Run concealed raceways in straight lines with long sweep bends and offsets.

2. Where raceways turn up out of floor, curved portion shall not be visible.

3. Run exposed raceways parallel and perpendicular with building lines. Strap with two-hole flat straps; do not use minerallac straps.

4. Support raceways within 3' of each outlet box, fitting, or enclosure, and at 10' intervals. Use malleable iron or stamped steel clamps for branch circuit raceways; use pipe hangers for feeder raceways. Do not hang conduit with wire, perforated strap, or nails.

5. Cut all joints square, thread, ream and draw tight. Make bends and offsets with standard conduit ells or with an approved bender or hickey.

6. No more than three quarter-bends equivalent in any run.

7. Cap raceway ends to prevent entrance of debris during construction. Cap with approved pennies, plastic caps or covers; do not tape.

8. Complete raceway installation and clean thoroughly before pulling conductors.

9. Where conduits pass through fire-rated walls and/or floors, provide a UL-listed through-penetration assembly with fire rating equal to wall or floor penetrated. Materials shall be by 3M Company or equal. Each assembly shall be specific to the penetrating device, e.g., single conduit, multiple conduits, busway, etc. and shall be specific to the wall or floor construction penetrated, e.g., concrete, gypsum board on wall studs, etc. Install assemblies in accordance with material manufacturer's instructions and UL Building Materials Directory, latest edition.

10. Install expansion fittings with copper bonding jumpers in conduit runs which cross building expansion joints.

11. Ferrous metal raceways, cable trays, cablebus, auxiliary gutters, cable armor, boxes, cable sheathing, cabinets, metal elbows, couplings, nipples, fittings, supports, and support hardware shall be suitably protected against corrosion inside and outside (except threads at joints) by a coating of approved corrosion-resistant material (Thomas & Betts, Kopr-Shield, or equal). Where corrosion protection is necessary and the conduit is threaded in the field, the threads shall be coated with an approved electrically conductive, corrosion-resistant compound.

F. Install pull boxes as shown in drawings and as required to pull conductors without damage to insulation. Provide pull boxes in accessible locations only, and size in accordance with NEC.

G. Install raceways of sizes shown in drawings and comply with Table 1 of NEC (latest edition). In case of conflict, install larger size.

H. Provide in each empty raceway a pull cord or wire, identified with a cardboard tag as to location of equipment or outlet fed by conduit.

3.2 OUTLET, SWITCH, AND JUNCTION BOXES, FITTINGS

A. Provide outlet and junction boxes as required for power, lighting, and communications systems as shown in drawings.
B. Boxes shall be held securely in place by being imbedded in masonry, or shall be secured to a fixed structural unit such as a stud or joist.

3.3 CONDUCTORS

A. Provide conductors in raceways as shown in drawings for service, feeders and branch circuits.

B. Conductors No. 8 and larger shall be connected to equipment by means of pressure type mechanical lugs. Where multiple conductors are connected to the same terminal each conductor shall be provided with an individual lug.

C. Soldered splices shall be made mechanically secure before soldering.

D. Wire and cable shall be suitably protected from weather during storage and handling and shall be in good condition when installed.

E. Join conductors with approved connectors, or by soldering, brazing or welding. Tape all connections or cover with approved prefabricated insulating devices to provide insulation resistance at the connection equal to that of the wire. Make splices in boxes or fittings only.

F. Do not pull conductors before completion of masonry, concrete and other trades which generate dust and debris. See raceways section, above.

G. Install and terminate variable frequency drive cable in accordance with manufacturer guidelines. Shield and ground conductors shall be securely bonded to motor case and drive enclosure to ensure control of ground current and electrical noise.

3.4 TRANSFORMERS

A. Provide transformers complete and ready for operation, as indicated in drawings.

B. Install transformers on equipment foundation as specified herein and provide neoprene vibration-isolating pads under mounting channels at four corners. Connect conduits to transformer housing with flexible conduit no longer than 24" and grounding as specified across flex. Support in accordance with NEC and as approved by Engineer.

C. Where transformers are shown trapeze-mounted, provide supplementary structural steel as required to suspend or mount transformer from building structure. Paint structural steel with a specification grade, rust-preventive black paint.

D. Provide transformer secondary grounding per NFPA 70, sized per Table 250-122.

3.5 PANELBOARDS

A. Where shown on drawings and indicated in riser diagram, provide panelboards of the types and sizes indicated. Panelboards shall be installed with top of cabinet 72" above finished floor.

B. Comply with NFPA-70, Section 408, for installation requirements and with other applicable sections for clearances. Lay out all equipment rooms in advance of roughing and notify Engineer immediately, in writing, if interferences are encountered or if code requirements cannot be met with equipment proposed.

C. Provide multi-pole breakers of common-trip type to simultaneously disconnect all ungrounded conductors in multiwire branch circuits.
D. Allow in bid for panelboard skirts, painted to match panelboard above and/or below panelboards, wherever there are exposed conduits. Also allow in bid for painting panelboards cans wherever skirts are used.

3.6 SAFETY SWITCHES

A. Provide heavy duty, fusible safety switches at locations shown on drawings, and in accordance with NEC requirements. Provide nameplates on switches as specified in Section 26 05 00. Wording shall identify the load which switch disconnects.

3.7 SWITCHES AND RECEPTACLES

A. Provide switches and receptacles for power and lighting as shown in drawings. Where indicated, verify location of receptacles with Owner prior to roughing.

B. Gang plates where two or more devices occur at the same location. Verify locations in relation to door swings, and place devices on the strike side.

C. Install devices at locations indicated in details.

D. Install outlets and devices plumb, level and with positioning at roughing to suit final wall covering. Device plates shall contact finished walls all-around on all four sides.

E. Protect devices during painting and clean-up of job. Leave devices clean and free from paint, dirt and debris.

F. Prior to final completion, check all receptacles for shorts, opens and grounds and correct all incorrect connections. Use receptacle checker as manufactured by Daniel Woodhead Company, General Electric, Leviton, or equal.

3.8 GROUNDING

A. Provide grounding system to comply with NEC, as shown on drawings and as specified.

B. All ground fittings used shall be free from paint, grease, and other poorly conducting material, and contact surfaces shall be cleaned thoroughly to ensure good metal-to-metal contact.

C. Install bonding jumpers between all panelboards and feeder raceways connected thereto; across pull box and raceway expansion joints and across water meters located within buildings.

D. All connections to grounding conductors shall be accessible for inspection and shall be made with solderless connectors brazed or bolted to the equipment or structure to be grounded. Unless otherwise indicated in drawings, grounding conductors within raceway system shall be installed in exposed rigid steel conduit with both conductor and conduit bonded at each end. Do not cover main service grounding until Engineer has observed connections.

E. Provide a ground wire in all circuits sized per NEC Table 250-122 as applicable.

F. Provide in all runs of flexible conduit a separate grounding conductor sized per NEC Table 250-122.

END OF SECTION 26 20 00
SECTION 26 32 13

EMERGENCY POWER SYSTEM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. The following apply to the work under this Section:

1. Section 26 05 00, Electrical, General
2. Section 26 20 00, Interior Wiring Systems

1.2 SCOPE

A. Provide, complete and ready for operation, an emergency power system consisting of diesel-electric engine generator set, unit-mounted radiator, silencer, remote annunciator panel, emergency power off switch fuel piping storage/supply system, automatic transfer switch, line circuit breaker, controls, electrical distribution, piping and all other accessories, supplies, foundation, labor and materials required for a complete system. System shall comply with NFPA 110, Level 1 Installation.

B. The entire system including fuel storage, but excluding automatic transfer switch, shall be mounted inside a sound attenuated weatherproof housing and on a single, steel skid base. Entire unit shall be factory assembled, tested, shipped and lifted onto a job-furnished concrete mounting slab, sized to suit equipment furnished. Individual components brought to and assembled on the job site will not be accepted.

C. The system shall be as manufactured by Caterpillar, MTU-Online, Cummins-Onan, Kohler or approved equal. Equipment shall be furnished by a dealer with service facilities and spare parts stock, as approved by Engineer, within two hours time of the job site by normal ground transportation. In addition, the dealer shall be able to demonstrate, in the judgment of the Engineer, adequate experience in the installation/service of standby power equipment of equivalent size and type specified herein. Dealer shall also demonstrate, to the satisfaction of the Engineer, successful installation and operation of at least two installations of packaged emergency power plants.

D. All emergency transfer equipment/switchgear specified in other sections shall be supplied by the generator set manufacturer in order to establish and maintain a single source of system responsibility and coordination.

1.3 GENERAL

A. Materials and Workmanship: All materials, equipment and parts comprising the unit specified herein shall be new and unused, of current manufacture, and of highest grade.

B. Warranty: Equipment furnished under this section shall be guaranteed against defective parts or workmanship under terms of the manufacturer's and dealers standard warranty, for a period of two (2) years from acceptance by the Owner.

C. Tests: The generator set shall receive the manufacturer's standard factory load testing. Prior to acceptance of the installation, equipment shall be tested to show it is free of any defects and will start and be subjected to full load test.
D. Start-up and Instructions: On completion of installation, start-up shall be performed by a factory-trained dealer service representative. Operating and maintenance instruction books shall be supplied upon delivery to the unit and procedures explained to operating personnel.

E. Specifications and Drawings: Prior to bidding, bidders shall furnish information showing manufacturer's model numbers, dimensions and operating data for the generator set, radiator, silencer, transfer switch and major equipment. The successful bidder shall submit copies of pertinent drawings and wiring diagrams for approval prior to manufacture and assembly.

1.4 QUALITY ASSURANCE AND CODE CRITERIA

A. Manufacturer Qualifications: Maintain a service center capable of emergency maintenance and repairs at the project within two hours maximum response time (100 miles of the project site). The manufacturers' distribution responsible for the project territory will only be allowed to supply the product in order to provide Owner with local future service. Distributors outside of the project territory will not be allowed to provide product. The supplier must carry sufficient inventory to cover no less than 80% parts service within 24 hours and 95% within 48 hours.

B. Electrical Components, Devices and Accessories: Listed and labeled as defined in NFPA 70-2011 Article 100, by a testing agency acceptable to authorities having jurisdiction.

C. The generator set covered by these specifications shall be designed, tested, rated, assembled and installed in strict accordance with all applicable standards, including, but not limited to:

1. NFPA 70 (National Electrical Code)
2. NFPA 99
3. NFPA 110
4. CSA 100
5. CSA C22.2 No14
6. CSA 282
7. EN61000-6
8. EN55011
9. FCC Part 15 Subpart B
10. ISO8528
11. IEC61000
12. UL508
13. UL2200
14. UL142

D. Comply with NFPA 110 requirements for Level 1 emergency power supply system.
E. Engine Exhaust Emissions: Comply with applicable state and local government requirements. Actual engine emissions values shall be in compliance with applicable EPA emissions standards per ISO 8178 – D2 Emissions Cycle at specified eKW/bHP rating. Utilization of the “Transition Program for Equipment Manufacturers” (also known as “Flex Credits”) to achieve EPA certification is not acceptable. Emissions requirements/certifications of this package: EPA T2.

PART 2 – PRODUCTS

2.1 GENERATOR SET CHARACTERISTICS

A. Rating at 1800 RPM:

1. Standby capacity without Fan: 350 kW /437.5 kVA as indicated on drawings.

2. Power Factor: 0.8.

3. Frequency: 60 Hertz.

B. The specified standby capacity shall be for continuous electrical service during interruption of the normal utility source.

C. These ratings must be substantiated by manufacturer's standard published curves. Special ratings or maximum ratings are not acceptable.

D. Voltage: The generator output voltage shall be 277/480 volts, 3-phase, 4-wires.

2.2 GENERAL

A. Safety Standard: Comply with ASME B15.1.

B. Resistance to Seismic Forces: Supports for internal and external components, and fastenings for batteries, wiring, and piping are designed and constructed to withstand static or anticipated seismic forces, or both in any direction.

C. Skid: Adequate strength and rigidity to maintain alignment of mounted components without depending on a concrete foundation.

D. Space Heater: Provide a generator mounted space heater, 208 or 480 VAC to suit site conditions, and single phase. Space heater shall be thermostatically controlled and shall be disconnected when engine is running.

E. The generator set shall be mounted on steel spring type vibration isolators rated for International Building Code (IBC) seismic requirements. Anchor generator to concrete pad.

2.3 ENGINE

A. Type: The engine shall be water-cooled, in-line or Vee-type, four-stroke cycle. It shall meet specifications when operating on No. 2 domestic burner oil. Diesel engines requiring premium fuels will not be considered. The engine shall be equipped with lube oil and intake air filters; lube oil coolers, fuel piping, transfer pump, fuel priming pump and gear-driven water pump.

B. The engine governor shall be the electronic type and shall maintain frequency regulation not to exceed 3% (1.8 Hertz) from non load to full rated load.
C. Mounting: The unit shall be mounted on a structural steel sub-base and shall be provided with suitable vibration isolators.

D. Safety Devices: Safety shut-offs for high water temperature, low oil pressure, overspeed, and engine overcrank shall be provided.

E. Start Time: Comply with NFPA 110, Type 1 system requirements.

2.4 GENERATOR

A. Type: The generator shall be a 12-lead, re-connectable, three-phase, 60 Hertz, single bearing, synchronous type built to NEMA standards. Class F insulation shall be used on the stator and rotor, and both shall be further protected with 100% epoxy impregnation and an overcoat of resilient insulation material to reduce possible fungus and/or abrasion deterioration. Generator shall incorporate reactive droop compensation.

B. Regulator: A generator-mounted, volts-per-Hertz type regulator shall be provided to match the characteristics of the generator and engine. Voltage regulation shall be plus or minus 2 percent from no load to full rated load. Readily accessible voltage droop, voltage level and voltage gain controls shall be provided. Voltage level adjustment shall be a minimum of plus or minus 5 percent. The solid state regulator module shall be shock-mounted and epoxy-encapsulated for protection against vibration and atmospheric deterioration.

C. Excitation: Generator shall utilize Permanent Magnet (PMG) method of excitation.

D. Steady State Voltage Operational Bandwidth: Four percent of rated output voltage from no load to full load.

E. Steady-State Frequency Operational Bandwidth: 0.5 percent of rated frequency from no load to full load.

F. Transient Frequency Performance: Less than 5 percent variation for a 50 percent step-load increase or decrease. Frequency recovers to remain within the steady-state operating band within five seconds.

G. Output Waveform: At no load, harmonic content measured line to line to neutral does not exceed 5 percent total and 3 percent for single harmonics. The telephone influence factor, determined according to NEMA MG 1, shall not exceed 50.

H. Sustained Short-Circuit Current: For a three-phase, bolted short circuit at system output terminals, the system will supply a minimum of 300 percent of rated full-load current for not less than 10 seconds and then clear the fault automatically, without damage to any generator system component.

I. Load Sensitivity: The generator and its controls shall be capable of handling any connected VFD or UPS loads.

J. The generator winding shall be form wound. The winding shall have an intake filter that is easily removable and cleanable on the intake end.

2.5 COOLING SYSTEM

A. Radiator: A unit-mounted radiator with blower type fan shall be sized to maintain safe operation at 110 degrees F maximum ambient temperature without derating the unit.
B. Antifreeze: The engine cooling system shall be filled with a solution of 50 percent ethylene glycol.

2.6 FUEL SYSTEM

A. Provide a UL 2085 listed integrated sub-base fuel oil storage tank. Tank shall be double-wall tank within a tank, sized to provide a 24 hour run time per generator.

B. Tank Construction: The tank shall include seismic / hurricane mounting provisions as an integral, permanent tank component. Mounting provisions shall allow minimum 2" airspace between steel platform and secondary tank to facilitate inspection and maintenance of tank bottom. Mounting supports shall include a neoprene barrier of minimum 3/8" thickness to isolate fuel tank from steel platform.

C. Material Thickness: Primary Tank shall be constructed of minimum 3/16" A36 mild steel. Secondary Tank shall be constructed of minimum 3/16" A36 mild steel.

D. Tank Fittings: All tank ports shall be Schedule 40 Type 304 Stainless Steel pipe. Primary and secondary tanks shall have no penetrations below the fuel level, in accordance with UL 2085 requirements. Fittings shall be provided per UL142 and UL2085 requirements.

E. Lift lugs shall be UL approved with a 4:1 safety factor.

F. Fire-Rating and Insulating Material: The tank annular space shall be filled with a lightweight concrete mixture of minimum 6" nominal thickness. The tank shall carry a two-hour fire rating per the International Building Code.

G. Tank Finish: Preparation of outer tank shall be abrasive blasted per SSPC / SP10. Primer Coat of Outer tank shall be primed with one coat of high-build polyester glass flake primer to a thickness of 12-15 mils (DFT), color Charcoal Gray. Finish Coat of Outer tank shall be finish coated with aliphatic polyurethane to a thickness of 3-5 mils (DFT), color Phoenix Gray. Engine Room Finish area shall be top coated with a satin black textured finish.

H. Overfill Spill Containment Box: A spill containment box (UL-approved) shall be provided as an integral tank component, and shall carry the same FDEP approval number as the tank. Construction shall be 10-gauge Type 304 stainless steel. The box shall be vented to the atmosphere via a vent stack terminating with a cast aluminum mushroom vent.

I. Overfill Prevention Equipment: Tank shall be equipped with an overfill prevention valve set to positively shut off fuel flow at 95%. Kamlok tight-fill adaptor with crossbar shall be factory installed in fuel fill fitting. Valve shall include a cast aluminum dust cap. Overfill prevention valve shall carry a valid FDEP approval number. A high level probe shall be installed at 90% of tank fill capacity. The probe shall carry a valid FDEP approval number. An alarm panel shall be installed at the fill location in clear view of the filler. It shall annunciate high level and tank leak alarms. The alarm panel shall carry a valid FDEP approval number.

J. Leak Detection: A leak sensor probe assembly shall be provided in order to detect liquid in the tank interstitial. The leak sensor shall carry a valid FDEP approval number. The leak sensor shall be wired to the alarm panel located at the fill location. The leak sensor output from the alarm panel shall then be wired to the generator control panel for annunciation.

K. Connect fuel system complete to existing underground storage tank.

L. An engine-mounted fuel filter, fuel pressure gauge, and engine fuel piping priming pump shall be provided.
2.7 EXHAUST SYSTEM

A. Exhaust Silencer: Provide a critical type silencer including flexible exhaust fitting for unit mounting, properly sized and installed according to the manufacturer's recommendations. Silencer shall be mounted so that its weight is not supported by the engine. Exhaust pipe size shall be sufficient to ensure that measured exhaust back pressure does not exceed the maximum limitations specified by the generator set manufacturer. Silencer shall be mounted on top of weatherproof housing.

2.8 AUTOMATIC STARTING SYSTEM

A. Starting Motor: Provide a 24-volt dual DC electric starting system with positive engagement drive. Starting system shall incorporate an automatically reset circuit breaker for antibutt engagement.

B. Automatic Controls: Fully automatic generator set start-stop controls in the generator control panel shall be provided. Controls shall provide shutdown for low oil pressure, high water temperature, overspeed, overcrank, and one auxiliary contact for activating accessory items. Controls shall include a 30-second single cranking cycle limit with lockout.

C. Jacket Water Heater: A unit-mounted thermal circulation type water heater shall be furnished to maintain engine jacket water to 90 degrees F in an ambient temperature of 30 degrees F.

D. Batteries: A 24-volt lead-acid storage battery set of the heavy-duty diesel starting type shall be provided. The battery set shall be of sufficient capacity to provide for one and one-half minutes total cranking time without recharging and will be rated no less than 170 amp-hours. A battery rack and necessary cables and clamps shall be provided. Comply with NFPA 70, Article 480.

E. Battery Charger: A current-limiting battery charger shall be furnished to automatically recharge batteries. Charger shall float at 2.17 volts per cell and equalize at 2.33 volts per cell. It shall include overload protection, silicon diode full wave rectifiers, voltage surge suppressors, DC ammeter and voltmeter, and fused AC input. AC input voltage shall be 120 volts. Current output shall be not less than 10 amperes. Charger shall include malfunction alarm contacts for use in conjunction with remote annunciator.

2.9 GENERATOR CONTROL PANEL

A. Type: A generator-mounted NEMA 1 type, vibration isolated, dead front, 14 gauge steel control panel shall be provided.

B. Equipment: Panel shall contain, but not be limited to, the following equipment:
   1. Voltmeter, 3-1/2 inch, 2 percent accuracy.
   2. Ammeter, 3-1/2 inch, 2 percent accuracy.
   3. Ammeter phase selector switch.
   4. Frequency meter, 3-1/2 inch, dial type.
   5. Automatic starting controls as specified.
   6. Panel illumination lights and switch.
   7. Voltage level adjustment rheostat.
8. Engine oil pressure gauge.


10. Dry contacts for remote alarms wired to terminal strips.

11. Fault indicators for low oil pressure, high water temperature, overspeed and overcrank.


C. In lieu of individual equipment, manufacturer may provide standard digital control panel incorporating functions indicated.

2.10 MAIN LINE CIRCUIT BREAKER

A. Type: A generator-mounted main line molded case circuit breaker shall be provided as a load circuit interrupting and protection device. It shall operate both manually for normal switching function and automatically during overload and short circuit conditions.

B. The trip unit for each pole shall have elements providing inverse time delay during overload conditions and instantaneous magnetic tripping for short circuit protection. The circuit breaker shall meet standards established by Underwriters’ Laboratories, National Electric Manufacturer's Association, and National Electrical Code.

C. Generator exciter field circuit breakers will not be accepted for line protection.

2.11 AUTOMATIC TRANSFER SWITCH

A. The automatic transfer switch shall be supplied by the manufacturer of the engine-generator set. It shall be listed by Underwriters' Laboratories Standard 1008. The manufacturer shall furnish schematic and wiring diagrams for the automatic transfer switch and a typical interconnection wiring diagram for the entire standby system.

B. The automatic transfer switch shall be rated as indicated and wall mounted in a NEMA 1 enclosure. The transfer switch shall have, but not be limited to, the following characteristics:

1. Four-position cranking selector: Auto, Hand, Test, Off.

2. Time delay on start variable to 120 seconds.

3. Time delay on shut down variable to 10 minutes.

4. Time delay on re-transfer variable to 10 minutes.

5. Auxiliary contacts: four.


7. Normal and emergency line indicators.

8. Cabinet locks.

9. Exerciser: Field settable, to exercise plant on a once-per-week or other schedule, as directed by Owner; adjustable 30 to 50 minutes running time under load.
10. Closed transition function
11. Maintenance bypass switch

2.12 REMOTE ANNUNCIATOR PANEL

A. Provide manufacturer's standard (NFPA 99/110, CSA 282) remote annunciator panel with visual and audible signals. This panel shall annunciate, at a minimum, the following:
   1. Generator supplying load (emergency power)
   2. Utility supplying load (normal power)
   3. Low oil pressure
   4. Low water temperature
   5. High water temperature
   6. Low fuel alarm
   7. Overcrank
   8. Overspeed
   9. Battery charger malfunction

B. Switches shall be provided for lamp test and alarm silence.

2.13 EMERGENCY POWER OFF (EPO)

A. Provide emergency power off device to comply with NFPA 110, Level 1 Installations.

2.14 SOUND-ATTENUATED WEATHER PROOF HOUSING

A. Provide Level II sound-attenuated, weatherproof enclosure as part of integrated package with generator set, exhaust system and fuel tank. System shall be factory assembled on steel base.

B. Enclosure shall be of steel construction, minimum 14 gauge.

C. Doors and access panels shall be lockable and shall be located to allow easy access to all major generator and engine control components. Enclosure shall be NEC and NFPA compliant and provided with required working clearances around electrical equipment.

D. Air inlet and outlet louvers shall be provided in accordance with generator set manufacturer requirements.

E. Provide primed and powder coated finish. Color shall be as directed by architect from manufacturer's standard color selection.

2.15 GENERATOR ACCESS PLATFORM

A. The platform shall be cantilever supported off of the engine generator sub-base with formed aluminum frame, structural members, toe plates, railing posts, rails and floor assemblies.
Platform shall be of the U construction with 2 “walk” assemblies (outside of all generator set service doors), connected together with a “rear” platform at the control panel end.

B. A “ship’s ladder” shall be used to access the platform.

C. Design of platform shall permit inspection of all serviceable components including visual inspection of any radiator discharge plenum to confirm that radiator is “free” of any foreign obstructions.

D. Platform height shall be no greater than 1.5” above the bottom of the generator base frame.

E. The platform frame shall be of .125 gauge formed aluminum.

F. Frame design shall be pre-drilled to accept handrail mounting vertical supports. Structural frame members shall serve as the walkway toe-board supports. Vertical railing supports shall be secured to the toe-plates and horizontal structural members using 5/16” bolts on 6” centers.

G. All pieces shall be cut and formed using computer assisted design software for accuracy.

H. All bolts shall be 5/16” minimum.

I. Compression members shall be pre-drilled to connect the ladder assembly and frame to the tank and utilize 1/4 inch formed aluminum construction of the “ladder toe plate”.

J. No connection to the sub-base tank is permitted but rather all connections shall be through the engine base.

K. The walkway tread shall utilize .125” 1 inch thick minimum aluminum tread plate to provide sufficient cross section to resist vertically applied loads.

L. Platform shall provide for 180 degree “full swing opening” of all side service doors and at least 135 degree opening of the rear control panel door.

M. Handrails shall be a nominal 42” from the walkway surface.

N. All hand rails are to be .125 formed aluminum, at a 2 inch angle. The walkway (ladder and platform) shall meet standards of OSHA 3124 - Stairways and Ladders.

O. The platform shall be manufactured by Generator Systems Support or approved equal.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Contractor shall lay out all work in advance of construction. Coordinate all field measurements for conduit entry points, piping connections and auxiliaries and accessories prior to laying out work.

B. All work shall be neatly arranged and executed in a workmanlike manner.

C. Provide and install equipment on concrete foundation suitable to support weight of equipment, including all liquids and accessories. Foundation construction, thickness, dimensions and reinforcing shall be in accordance with manufacturer’s guidelines and as appropriate for soil conditions at installation location. Foundation shall be level, flat and include provisions for seismic mounting of equipment furnished.
D. Coordinate with all trades to avoid conflict with the Owner’s use of the building and grounds and provide at least 72 hours notice to the Owner prior to running of the engine.

E. Provide all cutting and patching of the building and the site in accordance with Section 26 05 00 of these specifications.

F. Make all connections for power, control, fuel and water as required for a complete system, including all plant auxiliaries.

G. For weatherproof enclosure: Provide one (1) GFI duplex receptacle and two (2) incandescent lampholders with guard and switch (GE Model #H7-DD or equal with 100 WIF lamping). Connect complete to power source per NFPA 110.

3.2 START-UP

A. A factory-trained technician, in the full-time employ of the engine generator supplier, shall be present at initial start-up of the emergency system and operational tests shall be performed at that time. The Engineer and/or Architect reserve the right to be present during such tests. Prior to start-up, the engine generator supplier shall furnish the necessary engine oil and antifreeze and make all adjustments necessary to make the entire system operational. In addition to start-up, the generator representative shall instruct the Owner's operating personnel in proper operation and care of the unit, along with supplying complete operating and maintenance manuals.

B. After installation is complete and normal power is available, a factory approved technician shall perform a four (4) hour loadbank test at 1.0 power factor at full nameplate rating. Include loadbank, cabling and all associated equipment and work as required for this test.

C. An Integrated Systems Test will be performed prior to turning facility over to Owner. Include in bid the presence of a factory-trained technician to assist in test, make adjustments to settings/programming and to take immediate corrective action for any deficiencies discovered during testing.

3.3 TRAINING

A. Provide a minimum of four (4) hours on-site training of Owner’s personnel in the proper operation and maintenance of the equipment. Review operation and maintenance manuals, parts manuals, service and testing procedures and emergency service procedure.

END OF SECTION 26 32 13
SECTION 26 43 13
SURGE PROTECTION DEVICES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. The following apply to the work under this section:
   1. Section 26 05 00, Electrical, General
   2. Section 26 20 00, Interior Wiring Systems

1.2 SCOPE
A. Provide an operational Transient Voltage Surge Suppression System (TVSS) for protection of selected sections of facility's AC Distribution System utilizing Surge Protective Devices (SPDs).
B. Provide all labor, materials and equipment as required for a complete and operational surge protection system.

1.3 APPLICABLE CODES AND STANDARDS
A. In addition to the codes and standards listed in Section 26 05 00, the latest editions of the following codes and standards apply to this work:
   1. UL 1449, Third Edition; UL 1283, Fifth Edition
   3. MIL-STD 220A - Electrical Line Noise Attenuation
   4. NFPA 70, Article 285 – Surge-Protective Devices (SPDs), 1kV or Less
   5. UL96A – Requirements for Master Label Certificates (Lightning Protection)
   6. IEEE 1100 (Emerald Book)

1.4 WARRANTY
A. Provide a minimum full five-year manufacturer's warranty against failure for each unit installed.

PART 2 – PRODUCTS

2.1 MATERIALS/CONSTRUCTION
A. SPDs shall be of solid state, hybrid, parallel circuit design; series elements will not be accepted.
B. SPDs shall protect all modes: L-L, L-N, L-G (N-G where applicable).
C. Service entrance SPDs shall incorporate hybrid 2-tier design utilizing metal oxide varistors and filter capacitors. Units shall contain modular, field replaceable surge devices and shall incorporate integral disconnection means and internal fusing to allow direct connection to switchgear bussing.
D. Distribution and Branch Circuit SPDs shall incorporate hybrid 2-tier design utilizing metal oxide varistors and filter capacitors.
E. Response time of all suppression components shall be equal to or less than one (1) nanosecond as measured with 6-inch lead length.

F. The TVSS system shall provide a joule rating that meets or exceeds ANSI/IEEE C62.41 Category C requirements.

G. SPDs shall have indicator status lights that monitor the operational status of the device.

H. All SPDs with the exception of point of use models shall include form C contacts for remote monitoring.

I. SPDs shall have a pulse life equal to or greater than 1,000 sequential ANSI/IEEE Category C waveforms. Submit certified test reports if requested by Engineer.

J. The TVSS surge current capacity of each SPD shall be equal to or greater than:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Entrance</td>
<td>277/480 v.</td>
</tr>
<tr>
<td>Distribution Panel</td>
<td>277/480 v.</td>
</tr>
<tr>
<td>Branch Circuit Panel</td>
<td>120/208 v.</td>
</tr>
<tr>
<td>Point of Use (120 v. outlet)</td>
<td>13K</td>
</tr>
</tbody>
</table>

K. The SPD suppression (clamping) voltage, in accordance with UL 1449, Third Edition, shall not exceed:

<table>
<thead>
<tr>
<th>PHASE</th>
<th>L-L</th>
<th>L-N</th>
<th>L-G</th>
<th>N-G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Entrance</td>
<td>277/480 v.</td>
<td>2000</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>Distribution Panel</td>
<td>277/480 v.</td>
<td>2000</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>Branch Circuit Panel</td>
<td>120/208 v.</td>
<td>1000</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>Point of Use (120 v. outlet)</td>
<td></td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
</tbody>
</table>

L. SPDs for Branch Circuit Panels shall incorporate sine wave tracking for electrical noise filtering.

M. SPDs shall be stand alone type. SPDs integral to switchgear or panelboards are not permitted.

N. SPD Short Circuit Current Rating (SCCR) shall exceed the available short circuit current at the point of attachment.

O. SPD Devices shall meet UL Certification code VZCA and listed as Suitable for LPS or TVSS/Arrester as designated by UL.
2.2 MANUFACTURERS

A. Current Technology, Thor Systems, LEA International or Liebert. No substitutions permitted.

B. All SPD devices shall be from the same manufacturer.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Provide SPDs at switchgear units, motor control centers, panelboards, and outlets as indicated.

B. For service entrance SPDs, provide lugs on gear bussing to allow direct connection.

C. Install strictly in accordance with manufacturer’s recommendations. Wire lead length shall be equal to or less than manufacturer’s recommended lengths and shall be kept as straight as possible.

D. Provide overcurrent protection in current ratings and number of poles per manufacturer’s instructions and in accordance with the National Electrical Code.

END OF SECTION 26 43 13
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The following apply to the work under this Section:

1. Section 26 05 00, Electrical, General

2. Section 26 20 00, Interior Wiring Systems

1.2 SCOPE

A. Provide all labor and material required to provide a complete Metasys power monitoring integration system extension compatible with the switchgear assembly electronic power metering system. This shall include all hardware, software, system installation, programming and system startup. The Metasys power monitoring integration system shall be as manufactured by Johnson Controls, Inc.

B. Contractor shall engage Johnson Controls, Inc. (JCI) to provide control work under this contract. JCI presently installs and maintains a Metasys power monitoring system for the MUSC campus and shall be engaged under this contract to provide necessary JCI equipment and to tie all available power monitoring functions into the Metasys system at a location directed by the Owner.

C. Power monitoring system shall bring the following functions into the Metasys system:

1. Phase currents

2. Volts L-L

3. Volts L-N

4. kW

5. kVAR

6. Power factor

7. Frequency

8. kWh

9. kVARh

10. kVAh

11. Energy accumulation modes

12. THD voltage
13. THD current
14. Current demand
15. Power demand
16. Date and time stamping

1.3 GENERAL

A. Materials and Workmanship: All materials, equipment, and parts comprising the unit specified herein shall be new and unused, of current manufacture, and of highest grade.

B. Warranty: Equipment furnished under this section shall be guaranteed against defective parts or workmanship under terms of the manufacturer’s and dealers’ standard warranty, for a period of one year from acceptance by the Owner.

C. Tests: System shall receive the manufacturer’s standard factory testing. Prior to acceptance of the installation, test equipment to show it is free of any defects and provide a printout of all data available from the switchgear monitoring system to the Owner.

D. System Commissioning and Instructions: On completion of installation, commissioning shall be performed by a factory-trained Johnson Controls representative. Supply operating and maintenance instruction books to the Owner along with other closeout documents and explain procedures to operating personnel.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. All equipment shall be as provided by Johnson Controls, Inc. (JCI) and shall be compatible with the existing campus-wide power monitoring system.

B. Basic materials shall comply with Section 26 20 00 of these specifications.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with JCI and gear manufacturer requirements for coordination of the monitoring systems.

B. Install in strict accordance with JCI and gear manufacturer instructions.

END OF SECTION 28 16 00