

PROJECT MANUAL

SOUTH POINTE HS AUDITORIUM AV RENOVATION

ROCK HILL SCHOOLS
BID # 19-2042

ROCK HILL SCHOOLS, YORK DISTRICT THREE
ROCK HILL, SOUTH CAROLINA

MOSELEYARCHITECTS

ARCHITECTURAL

COLUMBIA, SOUTH CAROLINA



CONSULTANT

CHARLOTTE, NORTH CAROLINA

APRIL 29, 2020

VOLUME 1 OF 1

APN #
591352

SOUTH POINTE HS AUDITORIUM AV RENOVATION; ROCK HILL, SC

Architect's Project No: 591352

Rock Hill Schools Bid No.: 19-2042

DIVISION 00 BIDDING AND CONTRACTUAL REQUIREMENTS

001100	Invitation to Bid
002100	Instructions to Bidders (AIA Document A701, 1997 edition)
002600	Prebid Question Form: (Use on-line form. To access form go to www.moseleyarchitects.com , "Bidding", "Submit Question").
004100	Bid Form
004313	Bid Bond (AIA Document A310, 2010 edition)
004325	Substitution Request Form (During Bidding)
004513	Contractor's Qualification Statement (AIA Document A305, 1986 edition)
005213	Standard Form of Agreement Between Owner and Contractor (AIA Document A105, 2017 edition)
006113	Performance Bond (AIA Document A312, 2010 edition)
006113	Payment Bond (AIA Document A312, 2010 edition)

SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS

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013100	Project Management and Coordination
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014000	Quality Requirements
014200	References
016000	Product Requirements
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DIVISION 2 – EXISTING CONDITIONS – NOT USED

DIVISION 3 – CONCRETE – NOT USED

DIVISION 4 – MASONRY – NOT USED

DIVISION 5 – METALS – NOT USED

DIVISION 6 – WOOD PLASTICS AND COMPOSITES – NOT USED

DIVISION 7 – THERMAL AND MOISTURE PROTECTION – NOT USED

DIVISION 8 – OPENINGS – NOT USED

DIVISION 9 – FINISHES – NOT USED

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DIVISION 14 – CONVEYING SYSTEMS – NOT USED

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DIVISION 22 – PLUMBING – NOT USED

DIVISION 23 – MECHANICAL – NOT USED

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DIVISIONS 28 – ELECTRONIC SAFETY AND SECURITY – NOT USED

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INVITATION TO BID

Sealed bids for construction of the **South Pointe HS Auditorium AV Renovation, Rock Hill SC**, will be received via **Vendor Registry***, until but no later than 2:00 p.m., local prevailing time, **June 11, 2020**. No physical bids will be accepted nor will any physical attendance at the bid opening be allowed.

***All bidders must be registered with Vendor Registry.** Registration for Rock Hill Schools is FREE. Link to Vendor Registry: <https://vrapp.vendorregistry.com/Vendor/Register/Index/rock-hill-school-district-three-sc-vendor-registration>

To keep social distancing in compliance with the Governor's Executive Order, the District encourages vendors who wish to attend the bid opening to do so by conference call.

Vendors may take part by dialing:
Phone Number: 803 985-3599
Conference ID: 1440403

Bids received after the announced time and date for submittal, whether by mail or otherwise, will be rejected. Bidders are responsible for ensuring their Bid is received before the deadline indicated. **Bids submitted by telephone, telegraph, text message, facsimile, email or in person shall not be accepted.**

The Work of this Bid is as follows:

Work includes upgrading the existing audio visual equipment at South Pointe High School.

The deadline for substitutions, questions, and clarifications shall be June 4, 4:00 pm. Submit questions in writing. Responses will be in the form of addenda if required.

Bidders may obtain, and/or examine electronic Bidding Documents via Vendor Registry or by visiting moseleyarchitects.com, "Bidding." Any printing of the drawings needed by the contractor will be at Contractor expense.

In order for Moseley Architects to maintain an accurate list of plan holders, each Bidder is encouraged to complete the following steps:

1. Submit the following information to Moseley Architects:

ATTN: Kerry Petrie kpetrie@moseleyarchitects.com

Company Name:
Address:
Phone/Fax Number:
Email Address:
Contact Person:

2. Visit moseleyarchitects.com, select "Bidding" (**South Pointe HS Auditorium AV Renovation**) click on "Bid Documents", and follow the instructions located at the top of the page to "Request a key". Once complete, access to the electronic Bidding Document files can be obtained, saved, and or examined as needed.

A Bid Guarantee in the form of a certified check or bank draft, payable to the order of Rock Hill Schools, or **a satisfactory bid bond**, executed by the bidder and accept-able surety, in an amount equal to five per-cent (5%) of the total bid shall be submitted on AIA Document A310, with each bid. It is called to

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Architect's Project No: 591352
Rock Hill Schools Bid No.: 19-2042

the attention of the bidder that all bid bonds must be co-signed by a resident agent of the State of South Carolina.

The Bidder's attention is called to the requirements relative to the bidder's license. No contract will be awarded hereunder to any bidder who has not been properly licensed by the South Carolina Licensing Board of Contractors as required for the work they are bidding on.

The Owner reserves the right to reject any or all proposals and to waive any informalities in the bidding. Bids may be held by the Owner for a period not to exceed sixty (60) days from the date of the opening of bids for the purpose of reviewing the bids and investigating the qualifications of the bidders, prior to awarding of the contract.

Any questions relating to the Bidding Documents shall be directed to the architect, Moseley Architects at www.moseleyarchitects.com/bidding/, click on "Submit Question".

END OF INVITATION TO BID



AIA[®] Document A701[™] – 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)

Rock Hill Schools South Pointe HS Auditorium AV Renovation

THE OWNER:
(Name, legal status, address, and other information)

Rock Hill School District #3
386 E. Black Street
Rock Hill, South Carolina 29730

THE ARCHITECT:
(Name, legal status, address, and other information)

Moseley Architects of South Carolina
1320 Main Street
Suite 300
Columbia, South Carolina 29201

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- 6 **POST-BID INFORMATION**
- 7 **PERFORMANCE BOND AND PAYMENT BOND**
- 8 **ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS**

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

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612[™]-2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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 any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents, but are subject to and governed by definitions under applicable laws and regulations.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 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, to which Work may be added or deleted by 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, or that does not change, 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~~ in conformance with 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.

§ 1.10 A Responsible Bidder means a person or entity that has the capability, in all respects, to perform fully the Contract requirements and the moral and business integrity and reliability that will assure good faith performance.

§ 1.11 A Responsive Bidder means a person or entity that has submitted a Bid which conforms in all material respects to the Invitation to Bid and requirements of the Bidding Documents.

§ 1.12 An informality means a minor defect or variation of a Bid from the exact requirements of the Invitation to Bid and of the Bidding Documents which does not affect the price, quality, quantity or delivery schedule for the goods, services or construction being procured.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 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 observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

- .7 The Bidder has carefully reviewed the Bidding Documents and has verified that all of the Bidding Documents received are complete. The Bidder shall notify the Architect immediately if received Bidding Documents are not complete.
- .8 The Bidder has familiarized itself with all applicable federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work; the Bidder has obtained the necessary licenses for bidding, if applicable, and is licensed or certified to perform the Work..9
The Bidder shall pay all county, city, state and federal taxes required by laws in effect at the time the Bids are received and resulting from the Work or traceable thereto. Said taxes shall not be in addition to the Contract price between the Owner and the Bidder, as the taxes shall be an obligation of the Bidder and not of the Owner, and the Owner shall be held harmless and indemnified for the same by the Bidder.
- .10 The failure or omission of any Bidder to receive or examine any form, instrument, addendum or other documents, or to acquaint itself with conditions existing at the site(s), shall in no way relieve any Bidder from any obligations with respect to its Bid or to the Contract.
- .11 The Bidder agrees that its Bid shall be based on products and work indicated in the Bidding Documents.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 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.

§ 3.1.2.1 When the Bidding Documents are returned by the Bidders to the Architect or Owner, the shipping or postage shall be prepaid by the Bidder. The Bidder's deposit will not be refunded if the deposit sum is non-refundable as indicated in the Advertisement or Invitation to Bid.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.4.1 Every Bidder is responsible to review all Bidding Documents received to verify that each set contains a complete set of Contract Documents. Any incomplete Bidding Documents shall be immediately returned to the Architect.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall 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.

§ 3.3.1.1 The Bidder assumes all risks using a price or bid proposal representing a product or Work that is not indicated in the Bidding Documents and, if the Bidder elects to use that product or Work he shall submit it in accordance with the Division 1 requirements, and as stated herein. If that product or Work is rejected, the Bidder shall provide a product or Work indicated in the Bidding Documents at its cost. The Architect and the Owner shall not consider any requests for additional payments to provide the Work as required by the Contract Documents.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form ~~if one is~~ provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 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.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 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 Bidders known by the issuing office to have received complete Bidding Documents.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)

Copies of the Addendum will be posted electronically and a notice of posting will be sent via facsimile/email to each plan holder of record.

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 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.

§ 3.4.3.1 Depending on the nature of an Addendum (clarifications, limited scope of revisions, added manufacturers) issued less than four days prior to receipt date, the Architect, in its professional judgment, reserves the right to issue said Addendum without postponement of the bid date. However, if in the professional judgment of the Architect, the information contained in the Addendum would be such that it would be unfair or unreasonable to prepare a bid proposal

based on the revisions in the Addendum, then the bid date will be postponed to allow distribution of the Addendum and time to prepare a bid proposal.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain 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 or identified in the Bidding Documents.

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

§ 4.1.3 ~~Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.~~ Where so indicated by the bid form, all amounts shall be expressed in figures only.

§ 4.1.4 ~~Edits to entries made on paper bid forms must be initialed by the signer of the Bid. All changes made by the Bidder to the bid form or outside of the envelope shall be signed or initialed by the Bidder. Bids containing any conditions, omissions, erasures, alterations, or items not called for in the Bid, may be rejected by the Owner as being incomplete or nonresponsive.~~

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form. If the Bidder does not desire to bid on an Alternate, enter the words "No Bid". If the Owner elects to accept an Alternate, all Bidders submitting a "No Bid" for the Alternate selected by the Owner will be ruled nonresponsive and their Bid will not be considered in the award of the Contract. If the Bidder does not enter an Alternate Bid amount, "No Change", or "No Bid" for all requested Alternates, and leaves the Alternate information blank, their Bid will be considered nonresponsive and will not be considered in the award of the Contract.

§ 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 neither make 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 and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name 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.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 ~~Each Bid shall be accompanied by the following bid security:~~ bid security in the form of either a cashier's or certified check or an acceptable Bid Bond in the amount of five percent (5%) of the Bid amount, and made payable to Rock Hill Schools/ York County District Three, SC. The bid security is a guarantee that if the Contract is awarded by the Owner to the Bidder, the Bidder shall enter into the Contract with the Owner for the Work mentioned in this Bid or forfeit the bid security to the Owner, not as a penalty, but as liquidated damages. No forfeiture under a bid security shall exceed the lesser of (i) the difference between the Bid for which the bid security was written and the next low Bid of another Bidder, or (ii) the face amount of the bid security.

(Insert the form and amount of bid security.)

§ 4.2.2 All bonds shall be executed by a surety company selected by the Bidder which is legally authorized to do business in the State of South Carolina, and the bond shall be the same in both form as well as substance as AIA Document A310, Bid Bond. The Bidder shall require the attorney-in-fact, who executed the required bond on behalf of the surety company, to affix thereto a certified and current copy of the power of attorney. The bond premium shall be paid by the Bidder and the cost shall be included in the Bid.

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, 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. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

§ 4.3.2 Paper copies of the Bid, the bid security, 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.

§ 4.3.2.1 The Bidder shall place on the outside of the envelope containing its Bid the following notation: "Contractor License Number."

§ 4.3.2.3 Submit a single copy of the bid form and bid bond.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.3.6 In the solicitation or awarding of Contracts, the Owner shall not discriminate because of the race, religion, color, sex, age, disability or national origin of the Bidder. The Owner welcomes and encourages the participation of small businesses and businesses owned by women and minorities in procurement transactions made by the Owner.

§ 4.3.7 Trade secrets or proprietary information submitted by a Bidder in connection with a procurement transaction, shall not be subject to public disclosure under the Freedom of Information Act; however, the Bidder must invoke the applicable protection, prior to or upon submission of the data or other materials, and must identify the data or other materials to be protected and state the reasons why protection is necessary. The Owner will not accept responses to the Invitation to Bid in cases where the Bidder declares the entire response to the Invitation to Bid to be proprietary information. The Bidder must designate, in the smallest increments possible, that part of the Bid which is deemed to be proprietary.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving

~~party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.~~ A Bid may not be modified, withdrawn or canceled by the Bidder after the time and date designated for the receipt of Bids and for sixty-one (61) calendar days thereafter except as provided in subparagraph 4.4.3 of these Instructions to Bidders and each Bidder so agrees in submitting a Bid.

§ 4.4.1.1 A Bid may be modified or withdrawn by the Bidder any time prior to the time and date set for the receipt of Bids. The Bidder shall notify the Owner in writing of its intentions. Such notice shall be in writing over the signature of the person who submitted the original Bid and the notice shall be received and date and time stamped by the Owner on or before the date and time set for the receipt of Bids.

§ 4.4.1.2 Bidders may indicate modifications to Bid amounts by writing the modification on the outside of the sealed envelope containing the Bid and initialing the modification. Only the Bid amount may be modified by this means; no other qualifications may be made.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows: A Bidder may withdraw its Bid from consideration if the Bid price was substantially lower than other Bids due solely to a mistake therein, provided the Bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of Work, labor made directly in the compilation of a Bid which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the Bid sought to be withdrawn. If a Bid contains both clerical and judgment mistakes, a Bidder may withdraw its Bid from consideration if the Bid would have been substantially lower than the other Bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of Work, labor or material made directly in the compilation of a Bid which shall be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the Bid sought to be withdrawn.

§ 4.4.3.1 The Bidder shall submit to the Owner its original work papers, documents and materials used in the preparation of the Bid within one (1) day after the date fixed for submission of Bids. Such work papers shall be delivered to the Owner by the Bidder in person or by registered mail at or prior to the time fixed by the Owner for the opening of Bids. The Contract shall not be awarded by the Owner until such period has elapsed. Such mistake shall be proved only from the original work papers, documents, and materials delivered to the Owner as required herein.

§ 4.4.3.2 No Bidder who is permitted to withdraw a Bid shall for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the Contract is awarded or otherwise benefit directly or indirectly from the performance of the Work for which the withdrawn Bid was submitted.

§ 4.4.3.3 If a Bid is withdrawn under authority of this section, the next lowest responsive and responsible Bidder shall be deemed to be the low Bidder.

(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

§ 4.4.3.4 When the procedure set forth in the paragraphs above is utilized, original work papers, documents, and materials used in the preparation of the Bid must be submitted in an envelope or package separate and apart from the envelope containing the Bid marked clearly as to the contents.

§ 4.4.3.5 the Owner denies the withdrawal of a Bid under the provisions of this section, it shall notify the Bidder in writing stating the reasons for its decision and award the Contract to such Bidder at the Bid price, provided such Bidder is a responsible and responsive Bidder.

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders. All Bids received on time in accordance with the Bidding Document requirements shall be opened and publicly read aloud. Any Bidder, upon request, shall be afforded the opportunity to inspect Bid records within a reasonable time after the opening of all Bids but prior to award, except in the event that the public body decides not to accept any of the Bids and to reopen the Contract. Otherwise, Bid records shall be open to public inspection only after award of the Contract. Any inspection of procurement transaction records shall be subject to reasonable restriction to ensure the security and integrity of the records.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, 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 not in conformance with requirements of the Bidding Documents 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 responsive and responsible Bidder, Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the 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.

§ 5.3.1.1 In determining the lowest responsive Bidder, the Owner may consider, among other things, the Bidder's past performance, conduct on other contracts, and other information provided by the Bidder, including in the Contractor's Pre-Qualification Package, if requested.

§ 5.3.2 Unless otherwise prohibited by law, 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 lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

§ 5.3.3 In case of a tie Bid, preference may be given to goods, services, and construction produced in the City of Rock Hill or State of South Carolina or provided by persons, firms or corporations having principal places of business in the City of Rock Hill or State of South Carolina, if such a choice is available; otherwise the tie shall be decided by lot. A City of Rock Hill business may be given preference over a State of South Carolina business, if such a choice is available.

§ 5.3.4 If a Contract is to be awarded, the Owner will give the Bidder a Notice of Award within sixty (60) calendar days after the day of the Bid opening.

§ 5.4 NEGOTIATION WITH LOWEST RESPONSIVE AND RESPONSIBLE BIDDER

§ 5.4.1 If award of a Contract to the lowest responsive and responsible Bidder is precluded because of limitations on available funds, the Owner reserves the right to negotiate the Bid amount with the lowest responsive, responsible Bidder to obtain a Contract amount within the available funds. The negotiations may involve changes in either the features or scope of the Work. Such negotiations may include reducing the quantity, quality, or other cost saving mechanisms involving items in the Bid amount, including unit prices (if any) and/or allowances (if any) that affect the Bid amount, and/or Alternates (if any).

§ 5.4.2 The Owner shall notify the lowest responsive and responsible Bidder that such a situation exists and the Owner and Bidder shall then conduct their negotiations in person, by mail, by telephone or by any means they find convenient.

§ 5.4.3 If an acceptable Contract can be negotiated, the changes to the Bid amount and Bidding Documents agreed upon in the negotiations shall be summarized in a "Post Bid Addendum," and included in the Contract.

§ 5.4.4 If the Owner and the lowest responsive and responsible Bidder cannot negotiate a Contract within available funds, the Owner shall terminate negotiations and reject all bids.

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 and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

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

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; 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, Owner~~, 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. The Bidder may also submit any required entity with an adjustment in the Base Bid or Alternate Bid to account for cover the difference in cost occasioned by such substitution. such substitution, provided such adjustment in cost is justifiable and reasonable. 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~~ has 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.~~ Owner.

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. The successful Bidder shall furnish a Performance Bond covering the faithful performance of the Contract and a Payment Bond covering the payment of all obligations arising thereunder. Each bond shall be written for the full value of the Contract, including all adjustments as authorized by Change Order.~~

§ 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. All bonds shall be written by sureties or insurance companies licensed to do business in the State of South Carolina.~~

§ 7.1.3 ~~The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located. bond premiums shall be paid by the successful Bidder and the cost shall be included in the Bid price. Any subsequent bond premium costs shall be as authorized by Change Order.~~

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The successful 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 commence sooner 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, along with the signed Contract (Agreement) forms and the required Certificate of Insurance to the Owner within fifteen (15) calendar days after the Notice of Award of the Contract.

§ 7.2.2 Unless otherwise provided, the The bonds shall be written on AIA Document A312, Performance Bond and Payment Bond. Each bond shall be written for the full amount of the Contract.

§ 7.2.3 The bonds shall be dated on or after the date of the ~~Contract~~ Contract (Agreement).

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

~~ARTICLE 8 — ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS~~

~~ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR~~

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

- ~~.1 — AIA Document A101™ 2017, Unless otherwise required in the Bidding Documents, the Contract for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)~~
- ~~.2 — AIA Document A101™ 2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
(Insert the complete AIA Document number, including year, and Document title.)~~
- ~~.3 — AIA Document A201™ 2017, General Conditions of the Contract for Construction, unless otherwise stated below. Contractor Where the Basis of Payment Is a Stipulated Sum.
(Insert the complete AIA Document number, including year, and Document title.)~~
- ~~.4 — AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013.)~~
- ~~.5 — Drawings~~ § 8.2 The the Contractor recognize that time is of the essence and that the Owner will suffer financial loss if the Work is not completed by the Substantial Completion date required or as may be amended by the Contract Documents. Contractor recognizes the delays, expenses and damages that are involved in proving in a legal proceeding the actual loss that may be suffered by the Owner if the Work is not completed on time. Accordingly, the Owner and the Contractor agree, stipulate and fix as liquidated damages if delayed, but not as a penalty, the sum indicated on the Bid Form that the Contractor together with the Contractor's surety shall pay the Owner for each calendar day or part thereof that expires after the date required or as may be amended by the Contract Documents for the Substantial Completion of the Work.

Number

Title

Date

~~.6~~ Specifications

Section	Title	Date	Pages
---------	-------	------	-------

~~.7~~ Addenda:

Number	Date	Pages
--------	------	-------

~~.8~~ Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

AIA Document E204™ 2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017.)

The Sustainability Plan:

Title	Date	Pages
-------	------	-------

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

~~.9~~ Other documents listed below:

(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

§ 8.3 The Contractor recognizes that time is of the essence and that the Owner will suffer financial loss if the Work is not completed by the Final Completion date required or as may be amended by the Contract Documents. The Contractor recognizes the delays, expenses and damages that are involved in proving in a legal proceeding the actual loss that may be suffered by the Owner if the Work is not completed on time. Accordingly, the Owner and the Contractor agree, stipulate and fix as liquidated damages if delayed, but not as a penalty, the sum indicated on the Bid Form that the Contractor together with the Contractor's surety shall pay the Owner for each calendar day or part thereof that expires after the date required or as may be amended by the Contract Documents for the Final Completion of the Work.

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 14:31:56 ET on 05/11/2020 under Order No. 6822004161 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™ – 2018, 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)

(Title)

(Dated)

BID FORM

DATE: _____

TO: **Rock Hill School District Facilities Building,
2171 West Main Street, Rock Hill, SC 29732**

FROM: _____

Bidder's Name

Bidder's Address

Bidder's Address

FOR: **SOUTH POINTE HS AUDITORIUM AV RENOVATION**

Having carefully examined the site, and all of the Bidding and Contract Documents, and in compliance with the "Invitation to Bid," "Instructions to Bidders," and "Supplementary Instructions to Bidders," the undersigned proposes to provide all labor, materials, supplies, equipment, services, and perform all Work necessary for the construction of this Bid Package Work in accordance with the Bid Documents, dated **April 29, 2020** prepared by Moseley Architects.

Complete this Bid Form in blue or black ink or by typewriter. Discrepancies in the multiplications of units of work and the unit prices will be resolved in favor of the correct multiplication of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

BASE BID PRICE:

The Base Bid Price includes all Work required by and in strict accordance with the Bid Documents for this Package for the Lump Sum of:

\$ _____ (Figures only).

Alternate 1 – Bid Price:

Add Wireless Lavalier Microphones To Base System (Qty 4):

\$ _____ (Figures only).

Alternate 2 – Bid Price:

Add Video Distribution From Base System To Display Locations:

\$ _____ (Figures only).

Alternate 3 – Bid Price:

Add Handheld Microphones To Base System (Qty 2):

\$ _____ (Figures only).

Alternate 4 – Bid Price:

Add Control System Source Selection (Stage Or Control Room Desk):.

\$ _____ (Figures only).

RECEIPT OF ADDENDA

We acknowledge the receipt of the following Addenda:

- Addendum No. _____, dated _____
- Addendum No. _____, dated _____
- Addendum No. _____, dated _____
- Addendum No. _____, dated _____

SUB-CONTRACTORS LIST

Bidders Submitting a Single prime Contract are required to list the names of sub-contractors used in determining their bid. List the names of sub-contractors below and include license number for each. (If using separate sub-contractors for the combined bid list both subs and identify the project they are to construct.)

- Electrical: _____ License #: _____

TIME OF COMPLETION – BASE BID

Work shall be substantially complete and ready for occupancy by September 25, 2020.

Work shall be finally complete by October 23, 2020.

LIQUIDATED DAMAGES

Liquidated Damages in the amount of Two Hundred Fifty Dollars (**\$250**) per calendar day for failure to Substantially Complete the Work on time will be charged by the Owner to the Contractor for not completing his work by the date established for **Substantial Completion**. This amount is agreed upon as the proper measure of liquidated damage that the Owner will sustain per day by the failure of the undersigned to complete the Work by the stipulated dates and is not to be construed in any sense as a penalty.

Liquidated Damages in the amount of Two Hundred Fifty Dollars (**\$250**) per calendar day for failure to Finally Complete the Work 30 days following Substantial Completion will be charged by the Owner to the Contractor for not completing his work. This amount is agreed upon as the proper measure of liquidated damage that the Owner will sustain per day by the failure of the undersigned to complete the Work by the stipulated dates and is not to be construed in any sense as a penalty.

BID SECURITY

Attached hereto is a Bid Bond for Five Percent (**5%**) of the Base Bid, made payable Rock Hill School District York County District III.

AGREEMENT TO EXECUTE CONTRACT

Within sixty (60) days after the opening of Bids or any time thereafter before withdrawing this Bid, the Undersigned will, within ten (10) days after receipt of written Notice of Acceptance of this Bid, execute and deliver to the Owner the Contract Agreement Forms, together with Performance and Payment Bonds as required by the Contract Documents and Bids as accepted. The Undersigned designates as his office to which Notice of Acceptance shall be mailed or otherwise delivered:

(Name) _____

(Address) _____

(Email) _____

(Contractors License #) _____

Bidder is: Individual () (check appropriate box)
 Partnership ()
 Corporation ()

Residence of Bidder: _____
(if individual) _____

Name of Partners: _____
(if partnership) _____

State of Incorporation: _____
(if corporation)

Corporate
Seal

SIGNATURE: _____

(Typed Name of Bidder)

By: _____

Title: _____

Submitted this ____ day of _____ 2020

(This form may be reproduced in exact detail.)

END OF BID FORM



AIA[®] Document A310™ – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

To be determined

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Rock Hill School District #3

386 E. Black Street

Rock Hill, South Carolina 29730

BOND AMOUNT: \$**PROJECT:**

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

Rock Hill Schools South Pointe HS Auditorium AV Renovation

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

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

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

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

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

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 15:30:33 ET on 05/07/2020 under Order No. 6822004161 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A310™ – 2010, Bid Bond, 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)

(Title)

(Dated)

Substitution Request Form – Prior to Receipt of Bids

General Information				
Project Name	South Pointe Hs Auditorium Av Renovation			
A/E Project Number	591352			
Specified Product/Item Information				
Specification Title				
Section				
Page				
Article / Paragraph				
Description				
Proposed Substitution Information				
Proposed Substitution				
Reason for not providing specified product/item				
Comparative Data	Attach a point-by-point comparative data list. Include all differences between the proposed substitution and the specified product/item. If not provided, this Request will be rejected.			
Manufacturer				
Manufacturer Address				
Manufacturer Phone				
Manufacturer Representative Email address				
Trade / Model Name				
Model Number				
Installer (if known)				
Installer Address				
Installer Phone				
History	<input type="checkbox"/> New product	<input type="checkbox"/> 2-5 years	<input type="checkbox"/> 5-10 yrs	<input type="checkbox"/> 10 yrs or longer
Proposed substitution affects other parts of the Work	<input type="checkbox"/> Yes		<input type="checkbox"/> No	
If yes, explain				
Proposed Substitution Similar Installation				
Have you used this product/item on any other projects	<input type="checkbox"/> Yes		<input type="checkbox"/> No	
Project				
Project Address				
Architect/Engineer				
A/E Phone				

Owner	
Owner Phone	
Date installed	
Attached Supporting Data	
<input type="checkbox"/> Drawings	<input type="checkbox"/> Product Data/Specs
<input type="checkbox"/> Samples	<input type="checkbox"/> Tests
<input type="checkbox"/> Reports	<input type="checkbox"/>
Entity submitting this Substitution Request certifies all of the following:	
<ul style="list-style-type: none"> Proposed substitution has been fully investigated and determined to be equivalent or superior in all respects to the specified product, except as may otherwise be specifically and clearly indicated herein. If applicable, proposed substitution shall not adversely affect LEED requirements nor shall it prevent achieving the relative number of applicable LEED point[s] the specified product would have received. Proposed substitution's function, appearance, and quality are equal or superior in all respects to the specified product, except as may otherwise be specifically and clearly indicated herein. Same or superior warranty and/or guarantees shall be furnished for proposed substitution as is required for the specified product/item. Same maintenance service and source replacement parts, as applicable, are available; including local availability. Proposed substitution shall have no adverse effect on other trades. Proposed substitution shall not affect dimensions and functional clearances. Coordination, installation, and changes to the Work as necessary for the accepted proposed substitution shall be complete in all respects. 	
Entity's Information	
Submitted by	
Signed By	
Date	
Email address of Signee above	
Company Name	
Address	
Phone	
Architect / Engineer Review and Action	
<p>If this Substitution request is acceptable, it shall be included in an Addendum. If the proposed substitution is not included in an Addendum, then the proposed substitution was rejected; was not submitted in accordance with the Bidding/Procurement Documents; and/or this Form was not complete. This Form shall be completely filled in to be considered for acceptance.</p> <p>Acceptance of this Substitution request is an acceptance of the manufacturer and product/item only for general conformance with the design concept reflected in the Bidding/Procurement Documents. The A/E has made no attempt to verify specific performance data, or to check details of the proposed substitution as to special features, capacities, physical dimensions, or code and/or regulatory compliance – all of which remain the responsibility of the submitting entity and the Contractor (if not the submitting entity).</p>	

END OF SUBSTITUTION REQUEST FORM



AIA[®] Document A305™ – 1986

Contractor's Qualification Statement

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

SUBMITTED TO:

ADDRESS:

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

Corporation

Partnership

Individual

Joint Venture

Other

NAME OF PROJECT: *(if applicable)* Rock Hill Schools South Pointe HS Auditorium AV Renovation

TYPE OF WORK: *(file separate form for each Classification of Work)*

General Construction

HVAC

Electrical

Plumbing

Other: *(Specify)*

§ 1 ORGANIZATION

§ 1.1 How many years has your organization been in business as a Contractor?

§ 1.2 How many years has your organization been in business under its present business name?

§ 1.2.1 Under what other or former names has your organization operated?

§ 1.3 If your organization is a corporation, answer the following:

§ 1.3.1 Date of incorporation:

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

This form is approved and recommended by the American Institute of Architects (AIA) and The Associated General Contractors of America (AGC) for use in evaluating the qualifications of contractors. No endorsement of the submitting party or verification of the information is made by AIA or AGC.

- § 1.3.2 State of incorporation:
- § 1.3.3 President's name:
- § 1.3.4 Vice-president's name(s)

- § 1.3.5 Secretary's name:
- § 1.3.6 Treasurer's name:

§ 1.4 If your organization is a partnership, answer the following:

- § 1.4.1 Date of organization:
- § 1.4.2 Type of partnership (if applicable):
- § 1.4.3 Name(s) of general partner(s)

§ 1.5 If your organization is individually owned, answer the following:

- § 1.5.1 Date of organization:
- § 1.5.2 Name of owner:

§ 1.6 If the form of your organization is other than those listed above, describe it and name the principals:

§ 2 LICENSING

§ 2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

§ 2.2 List jurisdictions in which your organization's partnership or trade name is filed.

§ 3 EXPERIENCE

§ 3.1 List the categories of work that your organization normally performs with its own forces.

§ 3.2 Claims and Suits. (If the answer to any of the questions below is yes, please attach details.)

§ 3.2.1 Has your organization ever failed to complete any work awarded to it?

§ 3.2.2 Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

§ 3.2.3 Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

§ 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? (If the answer is yes, please attach details.)

§ 3.4 On a separate sheet, list major construction projects your organization has in progress, giving the name of project, owner, architect, contract amount, percent complete and scheduled completion date.

§ 3.4.1 State total worth of work in progress and under contract:

§ 3.5 On a separate sheet, list the major projects your organization has completed in the past five years, giving the name of project, owner, architect, contract amount, date of completion and percentage of the cost of the work performed with your own forces.

§ 3.5.1 State average annual amount of construction work performed during the past five years:

§ 3.6 On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

§ 4 REFERENCES

§ 4.1 Trade References:

§ 4.2 Bank References:

§ 4.3 Surety:

§ 4.3.1 Name of bonding company:

§ 4.3.2 Name and address of agent:

§ 5 FINANCING

§ 5.1 Financial Statement.

§ 5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);

Net Fixed Assets;

Other Assets;

Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);

Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

§ 5.1.2 Name and address of firm preparing attached financial statement, and date thereof:

§ 5.1.3 Is the attached financial statement for the identical organization named on page one?

§ 5.1.4 If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsiidiary).

§ 5.2 Will the organization whose financial statement is attached act as guarantor of the contract for construction?

§ 6 SIGNATURE

§ 6.1 Dated at this day of

Name of Organization:

By:

Title:

§ 6.2

M being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this day of

Notary Public:

My Commission Expires:

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 15:29:56 ET on 05/07/2020 under Order No. 6822004161 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A305™ – 1986, Contractor's Qualification Statement, 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)

(Title)

(Dated)



AIA[®] Document A105[™] – 2017

Standard Short Form of Agreement Between Owner and Contractor

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Rock Hill School District #3
386 E. Black Street
Rock Hill, South Carolina 29730
Telephone Number: 803-981-1000

and the Contractor:
(Name, legal status, address and other information)

To be determined

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

for the following Project:
(Name, location and detailed description)

Rock Hill Schools South Pointe HS Auditorium AV Renovation

The Architect:
(Name, legal status, address and other information)

Moseley Architects of South Carolina
1320 Main Street
Suite 300
Columbia, South Carolina 29201
Telephone Number: 803-724-1252

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS**
- 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**
- 3 CONTRACT SUM**
- 4 PAYMENTS**
- 5 INSURANCE**
- 6 GENERAL PROVISIONS**
- 7 OWNER**
- 8 CONTRACTOR**
- 9 ARCHITECT**
- 10 CHANGES IN THE WORK**
- 11 TIME**
- 12 PAYMENTS AND COMPLETION**
- 13 PROTECTION OF PERSONS AND PROPERTY**
- 14 CORRECTION OF WORK**
- 15 MISCELLANEOUS PROVISIONS**
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- 17 OTHER TERMS AND CONDITIONS**

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contractor shall complete the Work described in the Contract Documents for the Project. The Contract Documents consist of

- .1** this Agreement signed by the Owner and Contractor;
- .2** the drawings and specifications prepared by the Architect, dated , and enumerated as follows:

Drawings:

Number	Title	Date
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Specifications:

Section	Title	Pages
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- .3** addenda prepared by the Architect as follows:

Number	Date	Pages
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- .4 written orders for changes in the Work, pursuant to Article 10, issued after execution of this Agreement; and
- .5 other documents, if any, identified as follows:

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The Contract Time is the number of calendar days available to the Contractor to substantially complete the Work.

§ 2.2 Date of Commencement:

Unless otherwise set forth below, the date of commencement shall be the date of this Agreement.
(Insert the date of commencement if other than the date of this Agreement.)

§ 2.3 Substantial Completion:

Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion, as defined in Section 12.5, of the entire Work:
(Check the appropriate box and complete the necessary information.)

Not later than () calendar days from the date of commencement.

By the following date:

ARTICLE 3 CONTRACT SUM

§ 3.1 The Contract Sum shall include all items and services necessary for the proper execution and completion of the Work. Subject to additions and deductions in accordance with Article 10, the Contract Sum is:

(\$)

§ 3.2 For purposes of payment, the Contract Sum includes the following values related to portions of the Work:
(Itemize the Contract Sum among the major portions of the Work.)

Portion of the Work	Value
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§ 3.3 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and hereby accepted by the Owner:

(Identify the accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.4 Allowances, if any, included in the Contract Sum are as follows:
(Identify each allowance.)

Item	Price
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§ 3.5 Unit prices, if any, are as follows:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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ARTICLE 4 PAYMENTS

§ 4.1 Based on Contractor's Applications for Payment certified by the Architect, the Owner shall pay the Contractor, in accordance with Article 12, as follows:

(Insert below timing for payments and provisions for withholding retainage, if any.)

§ 4.2 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate below, or in the absence thereof, at the legal rate prevailing at the place of the Project.

(Insert rate of interest agreed upon, if any.)

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ARTICLE 5 INSURANCE

§ 5.1 The Contractor shall maintain the following types and limits of insurance until the expiration of the period for correction of Work as set forth in Section 14.2, subject to the terms and conditions set forth in this Section 5.1:

§ 5.1.1 Commercial General Liability insurance for the Project, written on an occurrence form, with policy limits of not less than (\$) each occurrence, (\$) general aggregate, and (\$) aggregate for products-completed operations hazard.

§ 5.1.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than (\$) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 5.1.3 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided that such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 5.1.1 and 5.1.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 5.1.4 Workers' Compensation at statutory limits.

§ 5.1.5 Employers' Liability with policy limits not less than (\$) each accident, (\$) each employee, and (\$) policy limit.

§ 5.1.6 The Contractor shall provide builder's risk insurance to cover the total value of the entire Project on a replacement cost basis.

§ 5.1.7 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ 5.2 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance and shall provide property insurance to cover the value of the Owner's property. The Contractor is entitled to receive an increase in the Contract Sum equal to the insurance proceeds related to a loss for damage to the Work covered by the Owner's property insurance.

§ 5.3 The Contractor shall obtain an endorsement to its Commercial General Liability insurance policy to provide coverage for the Contractor's obligations under Section 8.12.

§ 5.4 Prior to commencement of the Work, each party shall provide certificates of insurance showing their respective coverages.

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§ 5.5 Unless specifically precluded by the Owner's property insurance policy, the Owner and Contractor waive all rights against (1) each other and any of their subcontractors, suppliers, agents, and employees, each of the other; and (2) the Architect, Architect's consultants, and any of their agents and employees, for damages caused by fire or other causes of loss to the extent those losses are covered by property insurance or other insurance applicable to the Project, except such rights as they have to the proceeds of such insurance.

ARTICLE 6 GENERAL PROVISIONS

§ 6.1 The Contract

The Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a written modification in accordance with Article 10.

§ 6.2 The Work

The term "Work" means the construction and services required by the Contract Documents, and includes all other labor, materials, equipment, and services provided, or to be provided, by the Contractor to fulfill the Contractor's obligations.

§ 6.3 Intent

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 consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. Notwithstanding such performance, in case of a conflict, disagreement, or ambiguity, provide the better quality of Work. In case of a conflict, disagreement, or ambiguity, provide the greater quantity of Work. Civil, Plumbing, Mechanical, Fire Protection and Electrical Drawings are diagrammatic, showing general locations and arrangements of piping, wiring, equipment, security and technology, and specialties; not necessarily showing all required offsets, conditions and appurtenances required for maximum practical accessibility for operation, maintenance and clearances. Coordinate this Work in order to achieve the required and intended Work and notify the Architect immediately of conditions which do not comply or will not allow for this condition.

§ 6.4 Ownership and Use of Architect's Drawings, Specifications and Other Documents

~~Documents~~ Unless otherwise required by the Owner and Architect Agreement, documents prepared by the Architect are instruments of the Architect's service for use solely with respect to this Project. The Architect shall retain all common law, statutory, and other reserved rights, including the copyright. The Contractor, subcontractors, sub-subcontractors, and suppliers are authorized to use and reproduce the instruments of service solely and exclusively for execution of the Work. The instruments of service may not be used for other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Architect. The Architect may, with the concurrence of the Owner, and upon execution of the Architect's "Request for Electronic Files" form by the Contractor, furnish to the Contractor versions of the Instruments of Service in electronic form. The Contract Documents executed or identified in accordance with Article 1 shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers. The Contractor shall not transfer or reuse Instruments of Service in electronic or machine-readable form without the prior written consent of the Architect.

§ 6.5 Electronic Notice

Written notice under this Agreement may be given by one party to the other by email as set forth below. *(Insert requirements for delivering written notice by email such as name, title, and email address of the recipient, and whether and how the system will be required to generate a read receipt for the transmission.)*

ARTICLE 7 OWNER

§ 7.1 Information and Services Required of the Owner

§ 7.1.1 If requested by the Contractor, the Owner shall furnish all necessary surveys and a legal description of the site.

§ 7.1.2 Except for permits and fees under Section 8.7.1 that are the responsibility of the Contractor, the Owner shall obtain and pay for other necessary approvals, easements, assessments, and charges.

§ 7.1.3 Prior to commencement of the Work, at the written request of the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence.

§ 7.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the Contract Documents, the Owner may direct the Contractor in writing to stop the Work until the correction is made.

§ 7.3 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 seven 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, correct such deficiencies. In such case, the Architect may withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the cost of correction, provided the actions of the Owner and amounts charged to the Contractor were approved by the Architect.

§ 7.4 Owner's Right to Perform Construction and to Award Separate Contracts

§ 7.4.1 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.

§ 7.4.2 The Contractor shall coordinate and cooperate with the Owner's own forces and separate contractors employed by the Owner.

ARTICLE 8 CONTRACTOR

§ 8.1 Review of Contract Documents and Field Conditions by Contractor

§ 8.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 8.1.2 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner. Before commencing activities, the Contractor shall (1) take field measurements and verify field conditions; (2) carefully compare this and other information known to the Contractor with the Contract Documents; and (3) promptly report errors, inconsistencies, or omissions discovered to the Architect.

§ 8.2 Contractor's Construction Schedule

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.

§ 8.3 Supervision and Construction Procedures

§ 8.3.1 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.

§ 8.3.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner, through the Architect, the names of subcontractors or suppliers for each portion of the Work. The Contractor shall not contract with any subcontractor or supplier to whom the Owner or Architect have made a timely and reasonable objection.

§ 8.4 Labor and Materials

§ 8.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work.

§ 8.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 8.5 Warranty

The Contractor warrants to the Owner and Architect that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents. Any material or equipment warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 12.5.

§ 8.6 Taxes

The Contractor shall pay sales, consumer, use, and similar taxes that are legally required when the Contract is executed.

§ 8.7 Permits, Fees and Notices

§ 8.7.1 The Contractor shall obtain and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work. Unless otherwise provided in the Contract Documents, the Contractor is responsible for obtaining utilities for the Project and providing the Work relating to Project utilities as indicated. Responsibility for payment of fees associated with providing utilities to the Project shall be as follows:

.1 Any fees assessed by entities for providing permanent utilities to the Project shall be paid directly to the utility entities by Owner. These include "tap fees" and "electrical connection and service fee." Contractor shall coordinate the permanent utilities and the entity's related work to comply with the construction schedule.

.2 Any fees assessed by entities for providing temporary utilities to the Project for use by Contractor during construction of the Project shall be paid by the Contractor. The Contractor's payment of fees for temporary utilities shall be included in the Base Bid and Contract Sum and will not be reimbursed by the Owner.

§ 8.7.2 The Contractor shall comply with and give notices required by agencies having jurisdiction over the Work. 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 full responsibility for such Work and shall bear the attributable costs. The Contractor shall promptly notify the Architect in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules, and regulations.

§ 8.8 Submittals

The Contractor shall promptly review, approve in writing, and submit to the Architect shop drawings, product data, samples, and similar submittals required by the Contract Documents. Shop drawings, product data, samples, and similar submittals are not Contract Documents. 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. 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 accepted by the Architect. The Work shall be in accordance with accepted submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's acceptance of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written acceptance 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 acceptance thereof. The Contractor shall direct specific attention, in writing on a cover letter attached to the original or on the case of a resubmittal, on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to all revisions or deviations other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's acceptance of a resubmission shall not apply to such revisions or deviations.

§ 8.9 Use of Site

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, the Contract Documents, and the Owner.

§ 8.10 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 8.11 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of debris and trash related to the Work. At the completion of the Work, the Contractor shall remove its tools, construction equipment, machinery, and surplus material; and shall properly dispose of waste materials.

§ 8.12 Indemnification

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.

ARTICLE 9 ARCHITECT

§ 9.1 The Architect will provide administration of the Contract as described in the Contract Documents. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents. Subject to the standard of care for applying professional judgment to information used or relied upon, Architect and its Consultants may use and rely upon design elements, technical standards, test results, and all other information ordinarily or customarily furnished or published by others, including, but not limited to, specialty contractors, manufacturers, fabricators, and suppliers.

§ 9.2 The Architect will visit the site ~~at intervals appropriate to the stage of construction as 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 general compliance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.~~

§ 9.3 The Architect will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

§ 9.4 Based on the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor.

§ 9.5 The Architect has authority to reject Work that does not conform to the Contract Documents.

§ 9.6 The Architect will ~~promptly review and approve or~~ take appropriate action upon Contractor's submittals, such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for general conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken 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 details such as dimensions and quantities, or for substantiating instructions for installation or

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performance of equipment or systems, all of which remain the responsibility of the Contractor. The Architect's review of the Contractor's submittals shall not relieve the Contractor of its obligations. The Architect's review shall not constitute acceptance of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's acceptance of a specific item shall not indicate acceptance of an assembly of which the item is a component.

§ 9.7 On written request from either the Owner or Contractor, the Architect will promptly interpret and decide matters concerning performance under, and requirements of, the Contract Documents.

§ 9.8 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.

§ 9.9 The Architect's duties, responsibilities, and limits of authority as described in the Contract Documents shall not be changed without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

ARTICLE 10 CHANGES IN THE WORK

§ 10.1 ~~The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, and the Contract Sum and Contract Time shall be adjusted accordingly, in writing. If the Owner and Contractor cannot agree to a change in the Contract Sum, the Owner shall pay the Contractor its actual cost plus reasonable overhead and profit.~~

~~§ 10.2 The Architect may authorize or order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Such authorization or order shall be in writing and shall be binding on the Owner and Contractor. The Contractor shall proceed with such minor changes promptly.~~

§ 10.1. General

§ 10.1.1 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 10 and elsewhere in the Contract Documents.

§ 10.1.1.1 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.

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

§ 10.1.1.2.1 1 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

.4 As provided in Section 10.2.

§ 10.1.1.2.2 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.

§ 10.1.1.2.3 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.

§ 10.1.1.2.4 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 opinion, 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 17.

§ 10.2. If a change in the Work results in an adjustment to the Contract Sum, the adjustment (increase or decrease) shall be based on the following, unless noted otherwise:

.1 Material quantities and unit prices (separated into trades; include sales tax).

.2 Labor costs (raw cost).

.3 Labor burden, applied to labor only, including but not limited to, worker's compensation and public liability, social security tax, old age and unemployment insurance, union welfare fund and fringe benefits. Contractor shall be required to substantiate the labor burden percentage applied to any change in contract amount. Labor burden percentage shall not exceed 30% in any case.

.4 Construction equipment cost.

.5 Overhead and profit combined (on Claims for net increase only), as defined in Section 10.3.

.6 Cost of Premiums for Bonds (for Contractor only). Evidence of additional premium for bond shall be submitted with Claim.

.7 Extended Overhead Costs (if applicable) which shall be established by pro-rating the value of supervision, temporary facility, and General Conditions and all other direct and indirect costs of Contractor included in the Contract Sum over the number of days included in the Contract Time.

§ 10.2.1 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine 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, a reasonable amount. In such case, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data which shall include, a cost breakdown itemized in accordance with the current edition of R. S. Means Company, Inc., or other source of construction industry cost data acceptable to the Architect.

.1 Overhead shall include project management, field office personnel including supervision, superintendence, wages of timekeepers, watchmen and clerks, small tools, incidentals, general office expenses, insurance premiums, and all other expenses not included in "costs."

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.2 If the net value of the change results in a credit, the credit given shall be the net cost without overhead or profit (for Contractor, Subcontractor, or Sub-subcontractor). The cost as used herein shall include all items of labor, materials, equipment, premiums and bonds.

§ 10.2.2 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 17.

§ 10.2.3 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. 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.

§ 10.2.4 When the Owner and Contractor agree 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.

§ 10.3 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be subject to equitable adjustment. In Sections 10.2 and 10.2.1, the amount for overhead and profit combined, included in the total cost to the Owner, shall be based on the following schedule:

.1 for the Contractor, for Work performed by the Contractor's own forces, 15 percent of the cost.

.2 for the Contractor, for Work performed by the Contractor's Subcontractors, 5 percent of the amount due the Subcontractors.

.3 for each Subcontractor involved, for Work performed by that Subcontractor's own forces, 15 percent of the cost.

.4 for each Subcontractor involved, for Work performed by the Subcontractor's Sub-subcontractor, 5 percent of the amount due the Sub-subcontractor.

.5 cost to which overhead and profit is to be applied shall be determined in accordance with Section 10.2.

.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs in the manner prescribed above. Where major cost items are changes to Subcontracts, they shall be itemized also. In no case will a change involving over \$500.00 be approved without such itemization

§ 10.4 The in the Architect's opinion Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

§ 10.5 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be subject to equitable adjustment.

ARTICLE 11 TIME

§ 11.1 Time limits stated in the Contract Documents are of the essence of the Contract.

§ 11.2 If the Contractor is delayed at any time in progress of the Work 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, the Contract Time shall be subject to equitable adjustment.

§ 11.3 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the responsible party.

ARTICLE 12 PAYMENTS AND COMPLETION

§ 12.1 Contract Sum

The Contract Sum stated in this Agreement, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 12.2 Applications for Payment

§ 12.2.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for Work completed in accordance with the values stated in this Agreement. The Application shall be supported by data substantiating the Contractor's right to payment as the Owner or Architect may reasonably require, such as evidence of payments made to, and waivers of liens from, subcontractors and suppliers. 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 stored, and protected from damage, off the site at a location agreed upon in writing.

§ 12.2.2 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 other encumbrances adverse to the Owner's interests.

§ 12.3 Certificates for Payment

The Architect will, within seven working days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in part; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole. If certification or notification is not made within such seven day period, 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 and the Contract Sum shall be equitably adjusted due to the delay.

§ 12.4 Progress Payments

§ 12.4.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Contract Documents.

§ 12.4.2 The Contractor shall promptly pay each subcontractor and supplier, upon receipt of payment from the Owner, an amount determined in accordance with the terms of the applicable subcontracts and purchase orders.

§ 12.4.3 Neither the Owner nor the Architect shall have responsibility for payments to a subcontractor or supplier.

§ 12.4.4 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 requirements of the Contract Documents.

§ 12.5 Substantial Completion

§ 12.5.1 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 the Owner can occupy or utilize the Work for its intended use.

§ 12.5.2 When the Contractor believes that the Work or designated portion thereof is substantially complete, it will notify the Architect and the Architect will make an inspection to determine whether the Work is substantially complete. When the Architect determines that the Work is substantially complete, the Architect shall prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, establish the responsibilities of the Owner and Contractor, and 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.

§ 12.6 Final Completion and Final Payment

§ 12.6.1 Upon receipt of a final Application for Payment, the Architect will inspect the Work. When the Architect finds the Work acceptable and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment.

§ 12.6.2 Final payment shall not become due until the Contractor submits to the Architect releases and waivers of liens, and data establishing payment or satisfaction of obligations, such as receipts, claims, security interests, or encumbrances arising out of the Contract.

§ 12.6.3 Acceptance of final payment by the Contractor, a subcontractor or 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 13 PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to employees on the Work and other persons who may be affected thereby, the Work and materials and equipment to be incorporated therein, and other property at the site or adjacent thereto. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, or by anyone for whose acts the Contractor may be liable.

ARTICLE 14 CORRECTION OF WORK

§ 14.1 The Contractor shall promptly correct Work rejected by the Architect as failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement, and additional testing.

§ 14.2 In addition to the Contractor's other obligations including warranties under the Contract, the Contractor shall, for a period of one year after Substantial Completion, correct work not conforming to the requirements of the Contract Documents.

§ 14.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 7.3.

ARTICLE 15 MISCELLANEOUS PROVISIONS

§ 15.1 Assignment of Contract

Neither party to the Contract shall assign the Contract as a whole without written consent of the other.

§ 15.2 Tests and Inspections

§ 15.2.1 At the appropriate times, the Contractor shall arrange and bear cost of tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities.

§ 15.2.2 If the Architect requires additional testing, the Contractor shall perform those tests.

§ 15.2.3 The Owner shall bear cost of tests, inspections, or approvals that do not become requirements until after the Contract is executed. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 15.3 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules.

§ 15.4 The Contractor shall provide prompt written notice to the Owner and Architect if the Contractor becomes aware of any fault or defect(s) in the Project, including errors, omissions or inconsistencies in the Architect's Instruments of Service or in the Architect's professional services, so that the Architect may be afforded the opportunity to address such alleged fault or defect(s). The Contractor shall include in the Sub-Contractor Agreement a similar notification requirement on the part of the Sub-Contractor. Failure by the Contractor to promptly notify the Owner and Architect in writing of the discovery of such fault or defect(s) shall relieve the Owner and Architect of liability for any damages caused by the fault or defect(s) in excess of the damages that would have been incurred if the Contractor had given prompt notification to the Owner and Architect when such fault or defect(s) were first discovered by the Contractor, and the Architect had promptly corrected such fault or defect(s).

ARTICLE 16 TERMINATION OF THE CONTRACT

§ 16.1 Termination by the Contractor

If the Work is stopped under Section 12.3 for a period of 14 days through no fault of the Contractor, the Contractor may, upon seven additional 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, and costs incurred by reason of such termination.

§ 16.2 Termination by the Owner for Cause

§ 16.2.1 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 is otherwise guilty of substantial breach of a provision of the Contract Documents.

§ 16.2.2 When any of the above reasons exist, the Owner, after consultation with the Architect, 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

- .1 take possession of the site and of all materials thereon owned by the Contractor, and
- .2 finish the Work by whatever reasonable method the Owner may deem expedient.

§ 16.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 16.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 16.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract.

§ 16.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. 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 17 CLAIMS AND DISPUTES

(Insert any other terms or conditions below.)

§ 17.1 Claims

§ 17.1.1 Definition A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, 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.

§ 17.1.2 Time Limits The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the 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.

§ 17.1.3 Notice Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth herein, shall be initiated by notice to the other party and to the Initial Decision Maker. Claims by either party under this Section shall 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.

§ 17.1.4 Additional Cost If the Contractor wishes to make a Claim for an increase in the Contract Sum notice as provided herein shall be given before proceeding to execute the portion of the Work that is the subject of the Claim.

§ 17.1.5 Additional Time If the Contractor wishes to make a Claim for an increase in the Contract Time, 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. 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. Time extensions from adverse weather conditions shall not entitle the Contractor to "extended overhead" recovery.

§ 17.2 Initial Decision

§ 17.2.1 The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. An initial decision shall be required as a condition precedent to mediation of any Claim. The Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 17.2.2 The Initial Decision Maker will review Claims and within ten working 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 or 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.

§ 17.2.3 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 working days after receipt of the 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.

§ 17.2.4 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. Either party may file for mediation at any time, subject to the terms herein.

§ 17.2.5 The Contract Sum, Contract Time, or both shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article.

§ 17.3 Mediation The parties shall endeavor to resolve their claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for herein, by mediation as a condition precedent to binding dispute resolution. 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

ARTICLE 18 INSURANCE AND BONDS

§ 18.1 Contractor's Insurance and Bonds. The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents, or if not indicated, as required by law. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents. The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 18.2 Owners Insurance. The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents, or if not indicated, as required by law. The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 18.3 Property Insurance. 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 as well as subsequent Contract modifications thereto for the entire Work at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property required by this Section to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project. This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

This Agreement entered into as of the day and year first written above.
(If required by law, insert cancellation period, disclosures or other warning statements above the signatures.)

8

OWNER *(Signature)*

(Printed name and title)

OWNER *(Signature)*

(Printed name and title)

CONTRACTOR *(Signature)*

(Printed name and title)

LICENSE NO.:
JURISDICTION:

CONTRACTOR *(Signature)*

(Printed name and title)

LICENSE NO.:
JURISDICTION:

ARTICLE 17 OTHER TERMS AND CONDITIONS

(Insert any other terms or conditions below.)

This Agreement entered into as of the day and year first written above.
(If required by law, insert cancellation period, disclosures or other warning statements above the signatures.)



Init.

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Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 15:29:11 ET on 05/07/2020 under Order No. 6822004161 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A105™ – 2017, Standard Short Form of Agreement Between Owner and Contractor, 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)

(Title)

(Dated)



AIA[®] Document A312™ – 2010

Payment Bond

CONTRACTOR:

(Name, legal status and address)

To be determined

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Rock Hill School District #3
386 E. Black Street
Rock Hill, South Carolina 29730

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

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

CONSTRUCTION CONTRACT

Date:

Amount: \$ 0.00

Description:

(Name and location)

Rock Hill Schools South Pointe HS Auditorium AV Renovation

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 18

CONTRACTOR AS PRINCIPAL

Company: _____ *(Corporate Seal)*

SURETY

Company: _____ *(Corporate Seal)*

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Payment Bond.)

Signature: _____

Name and

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, 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; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

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

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 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 Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. 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 Construction 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 may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

SURETY

Company: _____ (Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 15:31:34 ET on 05/07/2020 under Order No. 6822004161 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A312™ – 2010, Payment Bond, 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)

(Title)

(Dated)



AIA® Document A312™ – 2010

Performance Bond

CONTRACTOR:

(Name, legal status and address)

To be determined

SURETY:

(Name, legal status and principal place of business)

OWNER:

(Name, legal status and address)

Rock Hill School District #3
386 E. Black Street
Rock Hill, South Carolina 29730

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

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

CONSTRUCTION CONTRACT

Date:

Amount: \$ 0.00

Description:

(Name and location)

Rock Hill Schools South Pointe HS Auditorium AV Renovation

BOND

Date:

(Not earlier than Construction Contract Date)

Amount: \$

Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL

Company: *(Corporate Seal)*

Signature: _____

Name and

Title:

(Any additional signatures appear on the last page of this Performance Bond.)

SURETY

Company: *(Corporate Seal)*

Signature: _____

Name and

Title:

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE:

(Architect, Engineer or other party:)

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .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 Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price 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 Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

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

§ 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner 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 Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corporate Seal)

Signature: _____

Name and Title: _____

Address: _____

SURETY

Company: _____ (Corporate Seal)

Signature: _____

Name and Title: _____

Address: _____

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 15:29:36 ET on 05/07/2020 under Order No. 6822004161 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A312™ – 2010, Performance Bond, 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)

(Title)

(Dated)

SOUTH POINTE HS AUDITORIUM AV RENOVATION; ROCK HILL, SC

Architect's Project No: 591352
Rock Hill Schools Bid No.: 19-2042

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 PROJECT INFORMATION

- A. Project Identification: South Pointe HS Auditorium AV Renovation.
 - 1. Project Location: 801 Neely Rd, Rock Hill, SC 29730
- B. Owner: Rock Hill Schools District Three of York County, SC.
- C. Architect: Moseley Architects of Columbia, South Carolina.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
 - 1. Work includes upgrading the existing audio visual equipment at South Pointe High School.
- B. Type of Contract:
 - 1. Project will be constructed under a single prime contract.
 - 2. Additional work undertaken at the direction of parties not representing the Owner, will be considered as unauthorized work and will not be paid for by the Owner. Additional work must be authorized in writing by the Owner or the Owner's authorized representative.
- C. Use of Professional Seals on Bidding, Procurement, and Contract Documents: or the purposes of this paragraph, the term "Regulant" refers to the individual who signs and seals parts of the Contract Documents (e.g. the Drawings and Specifications). Certain information has been excerpted verbatim from a source or sources (e.g., UL Assemblies, SMACNA details, IBC code text) which was considered or used by Regulant in preparing parts of the Contract Documents, as follows:
 - 1. The excerpted information was neither prepared under the direct control nor personal supervision nor created by the Regulant, as it was prepared by the source and owner of the excerpted information.
 - 2. For purposes of bidding, procuring, and performance of the Work, and in any event of conflicts or ambiguities between the excerpted information in the Contract Documents and the requirements of applicable codes and standards, provide the better quality or greater quantity of Work which, at a minimum, complies with the requirements of the applicable codes and standards.
 - 3. Advise Architect immediately upon becoming aware of requirements of the Work which are not consistent with the requirements of the excerpted information.
 - 4. Attribution is acknowledged for information obtained and included herein verbatim from other source or sources.
 - 5. Regulant has taken into consideration and used certain excerpted information from other sources which are applicable to the Contract Documents, and the Regulant indicates by its seal that it is assuming responsibility for its services in use and application of the excerpted information to the requirements of Work, but not for the excerpted information itself which was prepared by others. Regulant does not indicate by its seal that it is responsible for use

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or application of other information in such source or sources which was not included herein.

1.4 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- C. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.5 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will utilize the track premises during entire construction period. The site "Work Area" shown on plans is to be fenced with temporary fence to separate the Work under this contract from the Owner's use of the track.
- B. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways. Do not close or obstruct walkways without written permission from Owner.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
 - 3. Protect occupants from materials producing dust (e.g., silica) and other by-products as regulated by OSHA, federal, state, and local regulations.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours:
 - 1. Weekdays: 7 a.m. to 5 p.m.
 - 2. Weekend and Holiday Hours: Coordinate with Owner.
 - 3. Hours for Utility Shutdowns: Changes of utility services that effect existing school operations shall take place after-hours, on weekends, and holidays.

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- C. Existing Utility Interruptions: Do not interrupt utilities directly serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Architect and Owner not less than seven (7) days in advance of proposed utility interruptions.
 - 2. Obtain Architect's and Owner's written permission before proceeding with utility interruptions.
- D. Excessive Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Architect Owner not less than two (2) days in advance of proposed disruptive operations.
 - 2. Obtain Architect's and Owner's written permission before proceeding with disruptive operations.

1.7 SPECIAL REQUIREMENTS

- A. Criminal Background Investigations of individuals working on school property (sites occupied with students and sites not occupied with students).
- B. At a minimum, the contractor shall obtain a complete South Carolina statewide criminal background investigation for all employees and subcontractors who will work on this project, covering a period for the last seven (7) years. In the event that the contractor or subcontractor is from out of state, the criminal background investigation shall be broadened to include their home state, as well as the state of South Carolina as outlined above. The company providing such information must be recognized by local law enforcement agency as qualified to do so. All costs associated with these criminal background checks is the responsibility of the contractor.
 - 1. Prime contractor will be responsible and liable for the conduct and actions of their employees and all of their subcontractors working under them
 - 2. A daily sign-in sheet will be presented by prime contractor to the Owner's Representative who will be designated by the Owner at the Pre-Construction Meeting. This list will contain the name of each person on site and the company they work for.
 - 3. The daily sign in log will be made available to the successful prime contractors at the Pre-Construction Meeting.
- C. Any individual with the following criminal convictions or pending charges will **NOT** be permitted on any school project or property.
 - 1. Child molestation or abuse.
 - 2. Rape.
 - 3. Any sexually oriented crime.
 - 4. Drugs: Felony use, possession or distribution.
- D. Any individual with a prior conviction or pending charges contained in the aforementioned list, shall be banned (not allowed) from any school project or property.
- E. Rock Hill School District, may, at any time, request verification of criminal background investigation for any employee or subcontractor on school property.
- F. Photo ID Badges for personnel working on site for the duration of the project.
 - 1. Photo ID badges shall be issued to the General Contractor, Site Superintendent, and Subcontractor Superintendents who will be on site for the duration of the project.

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2. The General Contractor shall provide background checks for personnel working on site for the duration of the project.
 3. The General Contractor shall contact the CMO Project Manager to schedule an appointment to be photographed and issued a badge at RHSD3 Facilities Services located at 2171 W. Main Street, Rock Hill, SC.
 4. The CMO Project Manager shall maintain a Photo ID Log which lists name, company name, expected duration of work, and actual date of completion for each person who receives a photo ID badge.
 5. Photo ID badges must be returned at the completion of the project. A \$25 fee will be incurred for any photo ID badges that are lost or not returned at the complete to the project.
- G. Numbered Badges for subcontractor personnel who will be on site for a short duration.
1. The Site Superintendent for each project will receive a series of numbered badges for subcontractor personnel who will be on site for a short duration.
 2. The Site Superintendent will be responsible for collecting background checks for each person who receives a badge.
 3. The Site Superintendent shall maintain a daily numbered badge assignment log.
 4. The background checks and daily badge assignment log should be kept on file and be readily available to the CMO Project manager upon request.
 5. Numbered badges must be returned at the completion of the project. A \$25 fee will be incurred for any numbered badges that are lost or not returned at the completion of the project.
- H. The use of any type of tobacco product on school premises is prohibited. Workers will be asked to leave the site for the balance of the day on their first and second offenses. Workers will be asked to permanently leave the site after the third offense.
- I. If, in the opinion of the Architect, the General Contractor does not properly water tight the building from the elements – the Owner maintains the right to call in a 3rd party Industrial Hygienist for the purpose of evaluating the infiltration of moisture, employ moisture meters. This Industrial Hygienist will prepare a report of corrective action necessary to prevent future mold and mildew issues and the General Contractor is solely responsible for the corrective action necessary, as well as all costs associated with the services of the Industrial Hygienist and any additional surface or air quality testing fees that may be required to insure a safe building. No finishes, including drywall work are to commence until the building is permanently enclosed.
- J. All contractors understand and agree that the primary use of an occupied school facility is for the instructional programming to benefit the achievement of the students enrolled in said facility. During periods of standardized and other major testing such as EOC's, etc. the contractors agree to pursue quiet operations that do not disturb the testing operations. No claims for delay will be considered for these days of quiet operation during periods of testing.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

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SECTION 012300 – ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1:
 - 1. Alternate: Add Wireless Lavalier Microphones To Base System (Qty 4).
- B. Alternate No. 2:
 - 1. Alternate: Add Video Distribution From Base System To Display Locations.
- C. Alternate No. 3:
 - 1. Alternate: Add Handheld Microphones To Base System (Qty 2).
- D. Alternate No. 4:
 - 1. Alternate: Add Control System Source Selection (Stage Or Control Room Desk)

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and Contract Documents apply to this Section.

1.2 DEFINITIONS

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

1.3 SUBMITTALS

- A. Substitution Requests: Contractor shall request and submit a "Substitution Request Form – After Receipt of Bids" for all substitutions to be considered after receipt of bids.
 - 1. Substitution Request Form: Use the Architect's form, which can be obtained from the Architect at the time of the request.
 - a. The form is an electronic Word document requiring the Contractor to fill in "data fields."
 - b. A copy of the form is attached to the end of this Section for informational purposes only. Use the electronic Word document only.
 - 2. No substitutions will be considered unless submitted using the referenced "Substitution Request Form – After Receipt of Bids."
 - a. Substitution Request Form: Use the Architect's form, which can be obtained from the Architect at the time of the request.
 - 1) The form is an electronic Word document requiring the Contractor to fill in "data fields."
 - 3. All substitutions must be submitted by the Contractor, and shall include the Contractor's certification and signature.
 - a. Substitution requests submitted directly from subcontractors, sub-subcontractors, manufacturers, vendors, installer, and suppliers will be rejected.
 - 4. Failure to submit the form, or a fully completed form, shall result in the rejection of the proposed substitution; and shall also include:
 - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will be necessary to accommodate proposed substitution.
 - b. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

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- c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - d. Samples, where applicable or requested.
 - e. Certificates and qualification data, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - i. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
5. If the proposed substitution is found to be acceptable to the Architect, the request will be forwarded to the Owner for their approval.
 6. If the Owner approves the substitution, it will then be included in a Change Order or Construction Change Directive.
 7. Only substitutions included in Change Orders or Construction Change Directives shall be allowed to be included in the Work
 8. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed.
 - a. Forms of Acceptance: Change Order or Construction Change Directive only.
- 1.4 QUALITY ASSURANCE
- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.
- 1.5 PROCEDURES
- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than twenty-one (21) days prior to time required for preparation and review of related submittals.
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within thirty (30) days after Award of Construction Contract. Requests received after that time may be considered or rejected at discretion of Architect.
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume.
 - 1) Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.

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- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Construction Progress Schedule, in CPM or bar chart format.
 - b. Application for Payment forms with Continuation Sheets.
 - c. List of Subcontractors.
 - d. Schedule of alternates.
 - e. List of products.
 - f. Quantities lists.
 - g. List of principal suppliers and fabricators.
 - h. Submittals Schedule.
 - i. Items required to be indicated as separate activities in Contractor's construction schedule.
2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven (7) days before the date scheduled for submittal of initial Applications for Payment.
3. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide subschedules indicating values correlated with each phase of payment.

- B. Format and Content: Use the Project Manual table of contents format (specification section numbers and names) to establish line items for the Schedule of Values. Provide at least one (1) line item for each Specification Section.

1. The Schedule of Values shall be subject to approval by the Architect and Owner including designated line items and their associated dollar value.
2. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.

- f. Change Orders (numbers) that affect value.
- g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum or as appropriate.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Allowances: Provide a separate line item in the Schedule of Values for each allowance amount indicated. Indicate line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be indicated either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
10. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Contractor shall submit application for payment at regularly scheduled pay meetings as established at the Pre-Construction Conference. The period covered by each Application for Payment shall be clarified at the Pre-Construction Conference.
- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Materials previously stored and included in previous Applications for Payment.
 - b. Work completed for this Application utilizing previously stored materials.
 - c. Additional materials stored with this Application.
 - d. Total materials remaining stored, including materials with this Application.
- F. Transmittal: Submit four (4) (or number determined at Preconstruction Conference) signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within twenty-four (24) hours. One (1) copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final). Payment to the contractor will not be issued until the Contractor's Construction Schedule is submitted to the Architect and Owner.
 4. Products list (preliminary if not final).
 5. Submittals Schedule (preliminary if not final).
 6. List of Contractor's staff assignments. Include resumes of the Project Manager and Project Superintendent.
 7. Copies of building permits.
 8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 9. Initial progress report.
 10. Certificates of insurance and insurance policies.
 11. Performance and payment bonds.
 12. Data needed to acquire Owner's insurance.

- H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment indicating 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement indicating an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G707, "Consent of Surety to Final Payment."
 6. Evidence that claims have been settled.
 7. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 8. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
 - 4. Requests for Interpretation (RFIs).

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

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

4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

1.5 SUBMITTALS

- A. Key Personnel Names: Within fifteen (15) days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
 1. Post copies of list in temporary field office, if used. Keep list current at all times.

1.6 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: The Architect will prepare the meeting agenda and distribute it to all invited attendees.
 3. Minutes: The Architect will record significant discussions and agreements achieved. Within seven (7) days of the meeting the Architect will distribute the meeting minutes to the Owner, the Architect's consultants, and to the Contractor for distribution to his personnel and attending major subcontractors, manufacturers, suppliers and other concerned parties.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than fifteen (15) days after execution of the Agreement. Hold the conference at Project site or another convenient location. The Architect shall conduct the meeting to review responsibilities and personnel assignments.
 1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Critical work sequencing and long-lead items.
 - c. Designation of key personnel and their duties.
 - d. Procedures for processing field decisions and Change Orders.
 - e. Procedures for RFIs.
 - f. Procedures for testing and inspecting.

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- g. Procedures for processing Applications for Payment.
 - h. Distribution of the Contract Documents.
 - i. Submittal procedures.
 - j. Coordination and submittal of color & finish related selections.
 - k. Preparation of Record Documents.
 - l. Use of the premises.
 - m. Work restrictions.
 - n. Owner's occupancy requirements.
 - o. Responsibility for temporary facilities and controls.
 - p. Construction waste management and recycling.
 - q. Parking availability.
 - r. Office, work, and storage areas.
 - s. Equipment deliveries and priorities.
 - t. First aid.
 - u. Security.
 - v. Progress cleaning.
 - w. Working hours.
3. Minutes: Architect will record and Contractor will distribute meeting minutes, as noted.
- C. Progress Meetings: The Architect shall conduct progress meetings at monthly intervals. Coordinate dates of meetings with preparation of payment requests.
- 1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.

- 12) Indoor Air Quality.
 - 13) Quality and work standards.
 - 14) Status of correction of deficient items.
 - 15) Field observations.
 - 16) RFIs.
 - 17) Field Clarification. (FC)
 - 18) Status of proposal requests.
 - 19) Pending changes. (Potential Change Order – PCO)
 - 20) Status of Change Orders. (CO)
 - 21) Pending claims and disputes.
 - 22) Documentation of information for payment requests.
3. Minutes: Architect will record and Contractor will distribute meeting minutes, as noted.
 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.7 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
 1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
 1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Architect.
 5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

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- C. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven (7) working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to conditions of the Contract.
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within ten (10) days of receipt of the RFI response.
- D. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven (7) days if Contractor disagrees with response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log at intervals as established. Software log with not less than the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFIs that were dropped and not submitted.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Preliminary Construction Schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Submittals Schedule.
 - 4. Daily construction reports.
 - 5. Field condition reports.
 - 6. Special reports.

1.3 ACTION SUBMITTALS

- A. Submittals Schedule: Submit three (3) copies of schedule. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Architect's final release or approval.
- B. Preliminary Construction Schedule: Submit two (2) opaque copies.
- C. Contractor's Construction Schedule: Submit two (2) opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
 - 1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.
- D. Daily Construction Reports: Submit two (2) copies at monthly intervals.
- E. Field Condition Reports: Submit two (2) copies at time of discovery of differing conditions.
- F. Special Reports: Submit two (2) copies at time of unusual event.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.

2. Initial Submittal: Submit concurrently with preliminary network diagram. Include submittals required during the first sixty (60) days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning and Scheduling."
- B. Time Frame: Extend schedule from date established for commencement of the Work to date of Final Completion.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

2.3 CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within three days prior to Preconstruction Conference.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first sixty (60) days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. Submittal of the Final Construction Schedule and the Schedule of Values by the Contractor certifies that he will prosecute the Work in accordance with this Schedule, subject to any change therein which is implemented in accordance with the Contract Documents.

2.4 RECOVERY SCHEDULE

- A. Should the updated Construction Schedule show at any time during Contractor's performance, in the sole opinion of the Owner, that the Contractor is fourteen (14) or more days behind schedule for any Specific Date, or should Contractor be required to undertake actions under the General Conditions hereof, the Contractor shall prepare a Recovery Schedule at no additional cost to the Owner (unless the Owner is solely responsible for the event or occurrence which has caused the schedule slippage) explaining and displaying how Contractor intends to reschedule his Work in order to regain compliance with the Construction Schedule during the immediate subsequent pay period.
- B. If the Contractor believes that all of the time can be recovered during the subsequent pay period the Contractor will be permitted to prepare a Recovery Schedule as set forth below. However, if the Contractor believes it will take more than thirty (30) days to recover all of the lost time, he shall prepare and submit a request for revision to the Construction Schedule and comply with all of the requirements for a Schedule Revision.
 1. The Contractor shall prepare and submit to the Owner a one (1)-month maximum duration Recovery Schedule, incorporating best available information from Subcontractors and others, which will permit return to Construction Schedule at the

earliest possible time. The Contractor shall prepare a Recovery Schedule to same level of detail as the Construction Schedule for a maximum duration of one (1) month. This Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.

2. Within two (2) days after submission of Recovery Schedule to the Owner, the Contractor shall participate in a conference with the Owner to review and evaluate the Recovery Schedule. Within two (2) days of conference, the Contractor shall submit the revisions necessitated by the review for the Owner's review and approval. The Contractor shall use the approved Recovery Schedule as his plan for returning to the Construction Schedule.
3. Contractor shall confer continuously with the Owner to assess the effectiveness of the Recovery Schedule. As a result of this conference, the Owner will direct the Contractor as follows:
 - a. If the Owner determines the Contractor is still behind schedule, the Owner will direct the Contractor to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the Owner as provided elsewhere in the Contract Documents.
 - b. If the Owner determines the Contractor has successfully complied with provisions of the Recovery Schedule, the Owner will direct the Contractor to return to the use of the approved Construction Schedule.

2.5 SCHEDULE REVISIONS

- A. Should Contractor desire to or be required under the Contract Documents to make modifications or changes in his method of operation, his sequence of Work or the durations of the activities in his Construction Schedule, he shall do so in accordance with the requirements of the Contract Documents. All revisions to the approved Construction Schedule must be identified by the Contractor in writing and approved in writing by the Owner prior to incorporation into the approved schedule.
- B. Submit requests for revisions to the Construction Schedule to the Owner, together with written rationale for revisions and description of logic for rescheduling work and maintaining the Specific Dates listed in the Contract Documents. Incorporate proposed revisions acceptable to the Owner into the next update of Construction Schedule. Pay the Owner for unreasonable costs incurred by the Owner for the revisions.
- C. Revise schedule to include the effect of Changes, acts of God or other conditions or events which have affected the network. If the requested changes are acceptable to the Owner, incorporate them into the Detailed Construction Network in the next reporting period.
- D. Change Order logic will affect only those activities and performances dates directly concerned. Adjustments in Scheduled intermediate Completion Dates or for the Contract as a whole, will be considered only to the extent that there is insufficient remaining float to absorb these changes.
- E. Neither the updating or revision of Contractor's Detailed Construction Schedule nor the submission, updating changes or revisions of any report or schedule submitted to Owner by Contractor under this Section nor the Owner's review or non-objection of any such report or schedule shall have the effect of amending or modifying, in any way, the Contract Time, any

Contract Completion Date, or Contract Milestone Dates or of modifying or limiting in any way Contractor's obligations under this Contract.

- F. If there are separate contractors on the Project, prior to the submission by the Contractor of his proposed schedule revisions, he shall meet with and gain written approval of the separate contractors to make the revisions which shall be evidenced by the signatures of said separate contractors on the proposed schedule revisions. If accepted by the Owner the revisions shall be binding upon Contractor and all separate contractors on the Project.
- G. Submittal of any proposed schedule revisions by the Contractor certifies that he will prosecute the Work in accordance with this schedule revision, subject to any change therein which is implemented in accordance with the Contract Documents.

2.6 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one (1) day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one (1) week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. **Action Submittals:** Written and graphic information that requires Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as action submittals.
- B. **Informational Submittals:** Written information that does not require Architect's approval. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as informational submittals.
- C. **File Transfer Protocol (FTP):** Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. **Portable Document Format (PDF):** An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. **Electronic Files:** The Contractor may request electronic files (including CADD Files, BIM model, and Scans) utilizing the Architect's "Request Form for Electronic Files".
- B. **Completeness:** Submittals shall be complete in every respect and bound in sets. Each Submittal shall be clearly marked to show each item, component and optional feature proposed to be incorporated into the Project.
 - 1. Incomplete submittals may be returned without action. Incomplete submittal packages returned without action or for additional information are not subject to delay claims.
- C. **Submittals Schedule:** Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- E. **Processing Time:** Allow enough time for submittal review, including time for resubmittals, in accordance with General Conditions and as follows. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. **Initial Review:** Allow 5 work days processing time for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. **Intermediate Review:** If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. **Resubmittal Review:** Allow sufficient time for review of each resubmittal.

4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing or to allow for a resubmittal, if necessary.
- F. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 4 inches by 5 inches (100 mm by 125 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
- G. Deviations: Highlight, encircle, or otherwise identify deviations from Contract Documents on submittals. **Submittals without deviations identified will be considered to be in compliance with all requirements.**
- H. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
1. Submit one (1) copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
 2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- I. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
 2. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
 3. Transmittal Form: Use AIA Document G810 or other approved form.
- J. Re-submittals: Make re-submittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and indicate extent of revision.
 3. Resubmit submittals until Architect's action indicates Work may proceed.

- K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- L. Use for Construction: Use only final submittals with mark indicating action taken by the Architect in connection with construction.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Provide PDF Electronic submittals on this project. Prior to construction, the Contractor and Architect shall discuss the method for exchanging files. Use of the Architect's Newforma InfoExchange website and procedures can be used at no charge. If the Contractor chooses to use a different platform and methodology:
 - a. The Architect may reject the methodology or platform proposed and,
 - 1) use the Architect's Newforma InfoExchange website, or
 - 2) the project team will revert to traditional hard-copy exchange,
 - b. or the Contractor shall bear the cost of software, licensing, training, etc for the project team to participate.
 - B. If a specified product is provided, submit only Action Submittals and where designated, Closeout Submittals, unless directed otherwise by the Architect. The Contractor shall certify compliance with all requirements.

2.2 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections. **Action Submittals, for each specification section, shall be submitted as a complete package.**
 - 1. Number of Copies: Submit six (6) copies of each submittal (other than shop drawings and samples), unless otherwise indicated. Architect will return two (2) copies. Mark up and retain one (1) returned copy as a Project Record Document.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's printed and published installation instructions.
 - d. Standard color charts.
 - e. Notation of coordination requirements.
 - f. Availability and delivery time information.
 - g. Number and title of applicable Specification Section.
 - 4. Submit Product Data as PDF electronic file.

- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Schedules.
 - d. Compliance with specified standards.
 - e. Notation of coordination requirements.
 - f. Notation of dimensions established by field measurement.
 - g. Relationship and attachment to adjoining construction clearly indicated.
 - h. Seal and signature of professional engineer if specified.
 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 inches by 11 inches (215 mm by 280 mm) but no larger than 30 inches by 42 inches (standard E-size) (750 mm by 1000 mm).
 4. Number of Copies: Submit copies of each submittal, as follows:
 - a. Initial Submittal: Submit one (1) correctable, reproducible print and three (3) black-line prints. Architect will return the reproducible print.
 - b. Final Submittal: Submit three (3) black-line prints, unless prints are required for operation and maintenance manuals. Submit five (5) prints where prints are required for operation and maintenance manuals. Architect will retain two (2) prints; remainder will be returned.
 5. Submit Shop Drawings as PDF electronic file.
- D. Samples: Prepare physical units of materials or products, including the following:
1. Samples (for verification): Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 2. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Architect's sample where so indicated. Attach label on unexposed side that includes the following:
 - a. Generic description of Sample.
 - b. Product name or name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 3. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
 - a. If variation in color, pattern, texture, or other characteristic is inherent in the product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of the variations.

- b. Refer to individual Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
 4. Number of Samples: Submit three (3) sets of Samples. Architect will retain one (1) Sample set; remainder will be returned to be retained at project site.
 - a. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- E. Delegated-Design Services:
 1. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - a. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
 2. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally-signed PDF electronic file and three (3) paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - a. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.
- F. Application for Payment: Comply with requirements in Division 01 Section "Payment Procedures."

2.3 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 1. Number of Copies: Submit two (2) copies of each submittal, unless otherwise indicated. Architect will not return copies.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Schedule of Values: Comply with requirements in Division 01 Section "Payment Procedures".

- C. Contractor's Construction Schedule: Comply with requirements in Division 01 Section "Progress Schedule".
- D. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation".
- E. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- F. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- G. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
 - 1. Preparation of substrates.
 - 2. Required substrate tolerances.
 - 3. Sequence of installation or erection.
 - 4. Required installation tolerances.
 - 5. Required adjustments.
 - 6. Recommendations for cleaning and protection.
- H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- I. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- J. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- K. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- L. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- M. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- N. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements.

- O. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
 - P. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
 - Q. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
 - R. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
 - S. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
 - T. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - 1. Name, address, and telephone number of factory-authorized service representative making report.
 - 2. Statement on condition of substrates and their acceptability for installation of product.
 - 3. Statement that products at Project site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 6. Statement whether conditions, products, and installation will affect warranty.
 - 7. Other required items indicated in individual Specification Sections.
 - U. Warranties: Provide sample of special warranties required for the project.
 - V. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- 2.4 CLOSEOUT SUBMITTALS (and Maintenance Material Submittals)
- A. Comply with requirements specified in Division 01 Section "Closeout Procedures".

- B. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. The Architect will attach a comment sheet that will indicate what "action" the Contractor shall take. "Actions" and review procedure will be clarified at the Preconstruction Conference.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- E. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- F. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- I. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

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- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. 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. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.4 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Payment for these services will be made by the Owner.

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3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.

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5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.5 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used in conjunction with Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Architect, requested by Architect, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" or "installation" describes operations at Project site including unloading, temporary storage, examining substrate, unpacking, preparing substrate, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- J. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five (5) previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- K. "Replace": The term "replace" means to provide an acceptable like product or material in the place of a missing or unacceptable (rejected) product or material. To "replace" an unacceptable product or material includes its removal and disposal. (The term "reinstall" shall be used to indicate reuse of the original.)

- L. "Punch List" (AIA A201): A "punch list" is a listing of work items required by the Contract Documents which are incomplete or non-conforming. The list of observed deficiencies is compiled in the course of review to determine if the Contractor has attained Substantial Completion. It does not constitute a definitive list of remaining work items, and does not limit, amend or supersede requirements of the Contract Documents. Completion of punchlist items is a requirement to achieve Substantial Completion, in accordance with paragraph 9.8.3 of the General Conditions of the Contract for Construction.
- M. "Project site" is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project. The extent of Project site is shown on the Drawings and may or may not be identical with the description of the land on which Project is to be built.
- N. "To Be" or "Shall Be": Where the term "To Be" or "Shall Be" is utilized in a statement to describe Work that is to be performed, the Work shall be provided as part of this Contract.
- O. "Written," when used in conjunction with manufacturer's product handling and installation requirements means to adhere to the manufacturer's current printed and published information.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: Where compliance with two (2) or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.
- E. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards-developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of these entities. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade and Professional Associations of the U.S.," which are available in most libraries.

PART 2 - PRODUCTS (Not Used)

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PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

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

1.3 DEFINITIONS

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

1.4 ACTION SUBMITTALS

- A. Equivalent Product Requests: Submit request for consideration of each equivalent product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Equivalent Products" Article.
 - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a equivalent product request. Architect will notify Contractor of approval or rejection of proposed equivalent product request.
 - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures".

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- b. Use product specified if Architect does not issue a decision on use of a equivalent product request within time allocated.

- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures". Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

- B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

- C. Storage:

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

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 3. Refer to Divisions 02 through 33. Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures".

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected", Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 6. Or Equal: For products specified by name and accompanied by the term "or equal", or "or approved equal" or "or approved" comply with requirements in "Equivalent Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Equivalent products or substitutions for Contractor's convenience will only be considered in accordance with Division 01 Section "Substitution Procedures".
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Equivalent products or substitutions for Contractor's convenience will only be considered in accordance with Division 01 Section "Substitution Procedures".
 3. Products:

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- a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Equivalent products or substitutions for Contractor's convenience will only be considered in accordance with Division 01 Section "Substitution Procedures".
 - b. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed product.
4. Manufacturers:
- a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Equivalent products or substitutions for Contractor's convenience will only be considered in accordance with Division 01 Section "Substitution Procedures".
 - b. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed manufacturer's product.
5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a equivalent product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 EQUIVALENT PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for an equivalent product when all of the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is equivalent with other portions of the Work.

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2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 – EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

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

1.3 DEFINITIONS

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

1.4 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include, but are not limited to, the following:
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Conveying systems.
 - i. Electrical wiring systems.
 - j. Operating systems of special construction.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include, but are not limited to, the following:
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Equipment supports.
 - e. Piping, ductwork, vessels, and equipment.
 - f. Noise- and vibration-control elements and systems.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
 - a. Restrict cutting and patching of existing brick masonry indicated to remain to areas and methods approved by Architect.

- B. Manufacturer's Installation Instructions: Comply with manufacturer's current printed and published (written) instructions and recommendations for storing and installing products and equipment in applications indicated. Maintain copies on-site.

1.5 WARRANTY

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

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
 1. For all battery-operated devices, provide batteries rated for operation for at least one year.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: **Take field measurements as required to fit the Work properly. Recheck measurements before installing each product.** Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."
- E. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages in the construction.
- F. Coordinate delivery of items to Project site.

3.3 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.4 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
 1. Where batteries are not provided with battery-operated devices, install batteries.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. 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.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.5 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjacent occupied areas or interruption of free passage to adjacent occupied areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 01 Section "Summary."
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Masonry: Remove existing brick in whole units using hand tools. Minimize disturbance of existing masonry indicated to remain.
 - 5. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.
 - 6. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 - 7. Proceed with patching after construction operations requiring cutting are complete.
 - 8. New Masonry Openings: Cut back existing masonry for new openings; remove whole masonry units to suit opening size indicated. Cut masonry unit jambs are not acceptable. Do not remove excessive amounts of existing masonry.
 - 9. Pattern Finishes: Carefully cut the existing finish material to a joint, pattern line, or similar feature to help hide patching work.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

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1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Remove miscellaneous hangers, exposed nails not serving as fasteners, and similar protrusions; remove adhesive residue and tape; fill anchorage holes; and otherwise patch and restore surface to be a uniform substrate suitable for applied finishes.
 4. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 5. New Masonry Openings: Tooth in new matching masonry to build opening size required. Incorporate new lintel where required.
 6. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 7. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
 8. Concrete Floor to Receive Terrazzo Flooring: Concrete shall be cured for a minimum of 28 days. Do not use curing agents. Locate construction and control joints in concrete to align with joint and divider locations indicated on terrazzo floor pattern drawing.
 - a. Substrate Tolerance: Concrete sub-floor shall be level with a maximum variation from level of 1/8-inch in 10 feet.
 9. Terrazzo and Other Multi-Component Finishes: Match components, including, but not limited to, metal strips, cement, stone chips, flecks, and matrix. Grind, polish, seal, coat, and otherwise finish to match the texture and surface of adjacent finish and blend as approved by the Architect.
 10. Tile: Match tile, grout, and accessories and blend to adjacent work as approved by the Architect.
 11. Roof Penetrations: Patch roof in a manner that restores enclosure to a weathertight condition. Patch existing roof openings removed from service. Provide water-tight penetrations and flashing at new roof openings. Cut and patch roofing by methods and with materials so as not to void existing warranties.
- H. Existing Concrete Floor Surface: Provide trowelable leveling and patching compounds. Compounds shall be latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated. Coordinate with Division 09 flooring specifications. Prepare concrete substrate in accordance with

manufacturer's printed and published instructions, including shot-blasting the substrate, to ensure proper adhesion of the leveling and patching compounds.

- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

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

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- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure, including silica, during the construction period.

3.8 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Division 01 Section "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment. Replace failing batteries.
- E. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 1. Substantial Completion procedures.
 2. Final completion procedures.
 3. Project Record Documents.
 4. Operation and maintenance manuals.
 5. Warranties.
 6. Instruction of Owner's personnel.
 7. Final cleaning.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 ABOVE-CEILING WORK:

- A. Complete above-ceiling work prior to installation of finish ceilings. Coordinate with Owner's third-party contractors, such as data network and security systems, if any.
- B. Complete or correct deficiencies, if any, noted by Architect, Owner and local authorities having jurisdiction or confirm with Architect that any such deficiencies may be completed or corrected at a later date without obstructing installation of ceilings.
- C. Coordinate with local authorities having jurisdiction to obtain required above-ceiling reviews. Complete or correct above-ceiling work to comply with directives issued by the reviewing authorities. Upon completion/correction, certify in writing that all the items cited by reviewing authority have been completed/corrected and submit copies to the local authority, Owner, and Architect.

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- D. Following completion of Items A, B and C above, the ceiling may be "enclosed". Coordinate installation of acoustical ceiling hold-down clips, if any, with late stage activities such as HVAC testing and balancing and data network testing.

1.7 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete. Substantial Completion shall be for entire scope of Work (for example, both building and sitework) unless Owner has previously agreed to an alternative arrangement.
- B. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
1. Submit written confirmation that all LEED submittals have been completed in accordance with Division 1 sections "Submittal Procedures" and "Sustainable Design Requirements."
- C. Submittals Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain signature of Owner's agent for receipt of submittals.
 5. Submit test/adjust/balance records.
 6. Submit sustainable design submittals required in Division 01 Section "Sustainable Design Requirements" and in individual Sections.
 7. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- D. Procedures Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.

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3. Complete startup and testing of systems and equipment. Demonstrate that air and water systems are balanced and that automatic temperature control system is in control of all equipment as indicated. This may require separate demonstrations if controls cannot be tested for applicable seasons of the year.
 4. Submit written certification that all special inspections have been completed.
 5. Submit written certification that all Building Commissioning has been completed, and as required by the appropriate Sections.
 6. Submit written certification that testing/adjusting/balancing operations have been completed, and that systems are operational and under control in conformance with requirements of Division 01.
 7. Submit written certification that all Sustainable Design submittals have been completed in accordance with Division 1 sections "Submittal Procedures" and "Sustainable Design Requirements."
 8. Perform preventive maintenance on equipment used prior to Substantial Completion.
 9. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings.
 10. Advise Owner of changeover in heat and other utilities.
 11. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 12. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 13. Complete final cleaning requirements, including touchup painting.
 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- E. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of ten (10) days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.8 FINAL COMPLETION

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

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3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

4. Submit pest-control final inspection report.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of ten (10) days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.9 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding interior in numbered order of Architect's finish schedule.

2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

3. Include the following information at the top of each page:

a. Project name.

b. Date.

c. Name of Architect .

d. Name of Contractor.

e. Page number.

1.10 FINAL INSPECTION AND PUNCH LIST:

A. The contract has an established contract completion date. In order to avoid the assessment of liquidated damages, the contractor shall request in writing to the Architect/Engineer a final inspection on or prior to the established completion date. The contractor shall certify that all construction/installation is complete and has been checked out and is operating as designed. The Architect/Engineer shall notify the Owner in writing that the job is ready for inspection.

B. The Architect/Engineer, Construction Manager, contractor, and all sub-contractors associated with the construction/installation of the building equipment shall be present during the final inspection to demonstrate the proper operations of the equipment. Removal/replacement of necessary covers for inspection shall be conducted by the contractor.

C. At the time of inspection, should the architect/engineer and Owner's Representatives determine that the construction/installation is less than 100 percent complete to the extent that a re-inspection will be required, the inspection will cease and a charge will be assessed by the Owner against the Contractor, for costs associated with re-inspection requirements and for delays incurred as a result of failure to complete the punch list.

1.11 FINAL PUNCH LIST ITEMS:

- A. The contractor and sub-contractors shall have fourteen (14) calendar days from the date of final inspection to complete the repair of any and all items listed on the final punch list.
- B. If the contractor or his sub-contractor fails to complete all items on the final inspection punch list within the allocated fourteen (14) calendar days, liquidated damages in the amount specified by the contract will be assessed retroactive to the contract completion date and will continue until all items on the punch list are completed. (Only exception shall be by recommendation of the Architect/Engineer and/or Construction Manager, and approval by the Owner, that lack of completion was due to circumstances beyond the control of the Contractor.)

1.12 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.
- B. Record Drawings: Maintain and submit one (1) set of red-line white prints of Contract Drawings and Shop Drawings. In addition, submit one (1) PDF of the Record Drawings.
 - 1. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
 - b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where the Shop Drawings are marked, show cross-reference on Contract Drawings.
 - e. Specifically indicate and dimension all exterior underground conduits (or direct burial wiring), pullboxes, under slab panelboard, motor control center feeders, manholes, and future connection points. Dimension from a readily identifiable and accessible wall or corner of the building, or column.
 - f. Specifically indicate and dimension all underground utilities, including water, sewer, and gas (except branch piping to individual fixtures), including tanks, separators, cleanouts, valves, future connection points, and manholes (including actual manhole inverts and depths below grade of other items). Dimension from a readily identifiable and accessible wall or corner of the building, or column.
 - 2. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
 - 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - 4. Note Field Clarifications, RFI's, PCO's, Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 - 5. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.

- C. Record Specifications: Not required for project.
- D. Record Product Data: Not required for project.
- E. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

1.13 OPERATION AND MAINTENANCE MANUALS

- A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
 - 1. Operation Data:
 - a. Emergency instructions and procedures.
 - b. System, subsystem, and equipment descriptions, including operating standards.
 - c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
 - d. Description of controls and sequence of operations.
 - e. Piping diagrams.
 - 2. Maintenance Data:
 - a. Manufacturer's information, including list of spare parts.
 - b. Name, address, and telephone number of Installer or supplier.
 - c. Maintenance procedures.
 - d. Maintenance and service schedules for preventive and routine maintenance.
 - e. Maintenance record forms.
 - f. Sources of spare parts and maintenance materials.
 - g. Copies of maintenance service agreements.
 - h. Copies of warranties and bonds.
 - 3. Maintenance Schedule: For all Divisions 21, 22, 23, and Division 26 items of equipment, provide an Excel Spreadsheet (inserted in Manual and separately on disk) with the following information for each item of equipment as applicable:
 - a. Designation (from Documents)
 - b. Equipment tag ID
 - c. Location
 - d. Area served
 - e. Manufacturer and model number
 - f. Index location within O&M
 - g. Type of maintenance recommended by manufacturer, including frequency
 - h. Sheave and belt information, including manufacturer's replacement numbers
 - i. Name, address and telephone number of nearest authorized factory representative.
 - 4. Approved Submittal: For each Division 22, 23 and Division 26 item of equipment information, provide legible copy of the final approved submittal.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify

each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

- C. Recommended Procedure: Prepare maintenance manuals immediately following final submittal acceptance and submit to the Architect/Engineer for review, unless otherwise indicated. Incorporate comments, if any, and resubmit to Architect/Engineer. Provide triplicate sets (once approvals have been obtained) to the Owner.
- D. All Operation and Maintenance Manuals shall be submitted at 50 percent construction completion for A/E review, comments, and corrections. Corrections shall be made and resubmitted no later than 60 days prior to Substantial Completion.

1.14 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy (Phased Completion and Occupancy): Submit properly executed warranties within 15 days of completion of all designated portions of the Work that are completed in its entirety and occupied or used by Owner during construction period by separate agreement with Contractor, unless otherwise indicated. Warranty coverage period shall commence when all Work , including all Phased construction, is complete. Interim warranties is not acceptable.
- C. Organize warranty documents into an orderly sequence based on the Project Manual table of contents.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-inch by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 FINAL CLEANING

SOUTH POINTE HS AUDITORIUM AV RENOVATION; ROCK HILL, SC

Architect's Project No: 591352

Rock Hill Schools Bid No.: 19-2042

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Filtration media installed at the end of construction shall have a Minimum Efficiency Reporting Value (MERV) of 13. Coordinate filter replacement with the Division 1 Section "Indoor Air Quality Requirements". Clean exposed surfaces of diffusers, registers, and grilles.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.

- 2) No HVAC operation shall take place without filters, use temporary filters. All temporary filters shall be provided by the General Contractor. Dispose of and replace any temporary and permanent filters during construction. The use of "cleaned filters" is not acceptable.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - q. Leave Project clean and ready for occupancy.
 - C. Pest Control: Comply with pest control requirements in Division 1 Section "Temporary Facilities and Controls." Prepare written report.
 - D. Construction Waste Disposal: Comply with waste disposal requirements in Division 1 Section "Construction Waste Management and Disposal."
- 3.2 REPAIR OF THE WORK
- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
 - B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 27 41 16 – AUDIOVISUAL SYSTEMS

PART 1 - GENERAL

1.01 REQUIREMENTS

Contractor shall review all other documents for additional requirements and information that apply to the Work. If conflicts between this Section and/or the General Requirements and General Conditions occur, the more stringent shall apply. Contractor shall deliver the complete Audiovisual System, including any design-build requirements of this Section and the following Drawings:

TA-001	SHEET INDEX AND NOTES
TA-101	AV FLOOR PLAN -AREA "F"
TA-201	AV REFLECTED CEILING PLAN -AREA "F"
TA-202	AV REFLECTED CEILING PLAN -AREA "L"
TA-301	SECTIONS AND ELEVATIONS
TA-400	FUNCTIONAL LEGEND AND CABLING DETAILS
TA-401	AUDITORIUM VIDEO & CONTROL FUNCTIONALS
TA-402	AUDITORIUM AUDIO FUNCTIONALS
TA-501	RACK ELEVATIONS AND DETAILS
TA-601	INTERFACE PLATE DETAILS
TA-701	COORDINATION DETAILS
TA-801	CONTROL ROOM ENLARGED PLANS

1.02 PROJECT DESCRIPTION

- A. Auditorium Base Bid
1. Existing infrastructure is to be re-used, unless otherwise noted (UON).
 2. The following equipment as of July 2019 was in good working order and is to be re-used.
 - a. Fourteen (14) LF-HF SLS Loudspeakers in three different sizes from the US series. Two (2) large are flown above the stage flanking both sides of the projection screening, four (4) total. Four medium are flown mid-auditorium. Six (6) small are surface mounted under the balcony.
 - b. Draper projection screen (ceiling recessed, electric, 20' wide x 15' high)
 - c. Wall-mounted projection screen control
 - d. Floor standing equipment rack in control room
 - e. CD/Cassette player that is rack mounted in the control room
 - f. HDMI to fiber transmitter and receiver and the wall mounted equipment racks where they are housed.

- g. XLR patch panels wall-mounted by the stage and in the control room
 - h. Ashly Audio 4-channel amplifier
3. The existing XGA-native resolution, lamp projector (4:3 aspect ratio, 12,000 lumen) is upgraded to a WUXGA-native resolution, laser projector (16:10 aspect ratio).
 4. The center stage floor box with three (3) single gang compartments requires replacing with a new 4-gang floor box. The stage floor box currently houses seven (7) XLR connectors and a single data port. There are three (3) XLRs in two (2) single gang compartments and an XLR and data port in one. All XLR connections are assumed to route back to the XLR patch panel in the control room. Two (2) gangs in the new floor box are for decora-plate HDMI twisted pair transmitter and receivers. One is an input for presenters and the other is an output for a display. The other two (2) gangs are to feature three (3) XLR connectors and a data port.
 5. Video sources are all to be HDMI. One (1) HDMI input in an AAP plate is added to the existing wall-mounted rack off stage left. One (1) HDMI input is to be added in the retrofitted new stage center floor box that will extend the signal over twisted pair to the off stage left wall rack. A third HDMI input is provided at the control room desk.
 6. Off stage left HDMI sources feed an HDMI auto switch that is mounted in the existing wall rack. The switch outputs to an existing fiber transmitter to a receiver housed in a wall-mounted rack in the control room. NOTE: power to support added equipment needs to be assessed on site.
 7. Control room HDMI sources feed another HDMI auto switch that is mounted in the existing wall rack. The switch outputs to a wall box mounted HDMI transmitter to the main control room rack mounted receiver. NOTE: power to support added equipment needs to be assessed on site.
 8. A video distribution amplifier distributes the source to the displays, see also Alternate 2, and to the DSP for program audio distribution.
 9. One (1) handheld wired microphones with on/off switches is provided for the retrofitted new stage center floor box.
 10. Six (6) choir microphones suspend from the ceiling suspension system are provided for coverage of the stage. The microphone cables are to route within reach to the XLR patch panel off stage left. Operation Manuals to be provided by AV contractor is to include instructions to have no more than three (3) microphones open at any one time to prevent potential feedback issues. Phantom power is to be provided by the mixing console in the control room.
 11. A wireless microphone system is to be provided including eight (8) wireless bodypack/lavalier (not headset) microphones. Four (4) are to be

supplied as hand-held/lavalier combination units. The receivers are to be rack mounted off stage left with XLR snake cable lengths to reach XLR patch panel. Equipment rack wall mounting is to comply with ADA protrusion requirements and is to be assessed onsite for access to power. Antenna placement is to be assessed onsite to optimize reception.

12. An ADA listening system (RF) is added to comply with code. The transmitter is to be rack mounted in the control room. Antenna placement is to be assessed onsite to optimize reception. A dipole antenna is included for remoting as needed. User worn receivers and ear phone/neck loop lanyards will be stored in the control room.
13. The Yamaha audio mixing console at the control room desk is upgraded to a 32-analog channel digital console featuring presets and the ability to record audio files to a compatible USB storage device (OFE) with a sector size of 512 bytes formatted in FATA32. It is recommended that a high-speed device, such as a hard disk drive (HDD) or solid-state drive (SSD) is provided by the owner for recording instead of a USB storage device. A compatible PC mixing console application is included to support a virtual audio mixing console at the stage.
14. An audio, video and control digital signal processor (DSP) is to be mounted in the control room rack. This will provide priority to fire alarm and announcement feeds (provided by Others) to override AV audio.
15. The audio amplifiers are to be rack mounted in the control room. One existing amplifier is to be reused. A failed amplifier is to be replaced by three new ones. A network amplifier compatible with the DSP serves the mid-auditorium loudspeakers wired with a high or low impedance and provides future growth capabilities. Two low impedance amplifiers are provided to serve the loudspeakers under the balcony.
16. AV control system simplifies systems operation for teachers, students and special event groups. Functions are to include system power on/off and presets, video and audio muting, projection screen control, and overall microphone and program audio levels. A desktop control panel is to be provided in the control room. A wall-mounted control panel is to be provided back of stage.
17. A network switch compatible with the DSP, network amplifier and able to power the control panels is rack mounted in the control room. Rack cable management is included.
18. A power sequencer/surge protector is rack mounted in the control room, a basic surge protector is mounted in the back-of-stage rack.

B. Alternate 1 – Add Wireless Microphones

1. Expand wireless microphone system to including twelve (12) total wireless bodypack/lavalier (not headset) microphones, an addition of Four (4).

2. Add wireless audio receiver for the four additional microphones.
 3. Add passive antenna splitter kit.
- C. Alternate 2 – Add Video Distribution for Displays
1. For a future x-large display on a mobile cart (OFE), add 330' HDMI twisted pair transmitter and decora HDMI receiver in stage center floor box.
 2. For confidence monitor in front of stage, add 330' HDMI twisted pair transmitter and HDMI receiver. Modify the existing auditorium power and data floor box to include RJ45 pass thru for twisted pair signal. Provide one (1) medium size confidence monitor with tabletop mount. This monitor and HDMI receiver will be stored in the control room and will be brought out for presenter events upon request.
- D. Alternate 3 – Add Handheld Microphones
1. Add two (2) handheld wired microphones with on/off switches.
- E. Alternate 4 – Add Control System Source Selection (Stage or Control Room Desk)
1. Add IO to RS232 Control device for HDMI switcher in control room.
 2. Add programming hours to add functionality to control panels.

1.03 SCOPE OF WORK

- A. The Contractor shall provide a turn-key audiovisual system installation including, but not limited to, all cabling, loudspeakers, projection & display equipment, mounting hardware and electrical components including the necessary equipment, interconnections, transducers, labor, and services required to meet the functional requirement outlined in the design documents.
- B. The Contractor will be held responsible to have examined the site and premises and satisfied them self as to existing conditions under which they will be obligated to operate in performing their part of the work, or that, which will in any manner affect the work under this contract. This includes test/verification that infrastructure and existing equipment is adequate to support the AV system upgrade. Notify the owner if any discrepancies exist prior to any rework.
- C. Permits: Obtain any necessary permits for the execution of this work in conformance with applicable union regulations, Local, State and Federal codes and regulations.
- D. All aesthetic issues are to be coordinated and approved by the Owner, Architect, and Design Consultant.

- E. Provide, size, and install all conduit and penetrations, wire raceways, back boxes, and cabling connecting system components, as required by the Audiovisual System.
- F. Verify all conduit and penetrations, wire raceways, back boxes, mounting hardware to building structure, and cabling connecting system components, as required by the Audiovisual System as part of the base building fit out. Notify Owner of any discrepancies that may exist between the Shell Contract Documents and existing conditions.
- G. Verify AC power requirements for each equipment location. Notify Owner of any discrepancies that may exist between Shell Contract Documents and existing conditions.
- H. Patch, repair, finish and paint any surfaces that are damaged or demolished for access during this work. Room finishes to be returned to initial condition.
- I. Coordinate the resolution of any audiovisual system issues including, but not limited to, architectural and structural items associated with the project.
- J. Coordinate with other trades to ensure that all required access and clearances to equipment and services are provided and maintained.
- K. Verify site conditions including dimensions and clearances. Coordinate and size the exact location of the equipment racks.
- L. Provide project Site Acceptance Testing (SAT) by equipment manufacturer for all devices that require programming. This applies to devices such as Audio DSPs, video switches and control processors that rely on a software application to program, adjust, route and process the audio, video or control system equipment. The AV contractor is to assist the manufacturer with project Site Acceptance Testing.
- M. Conduct preliminary testing and adjustment. Submit documentation required by this Specification. Participate in approval testing for acceptance by the Owner. Perform final adjustments as required to meet the Specifications.
- N. Deliver to the Owner bound "as-built" system documentation. Transfer all warranties and equipment guarantees to the Owner and provide a written description of system operation at the time of acceptance of the Work by the Architect/Owner.
- O. Provide system operation training as specified in Part 3 of this Section.

1.04 QUALITY ASSURANCE

- A. All materials must be newly manufactured current production models and conform to all applicable codes and the relevant standards listed below:
 - 1. American National Standards Institute (ANSI)
 - 2. Electronic Industries Alliance (EIA)
 - 3. Institute of Electrical and Electronic Engineers (IEEE)

- B. Experience: The Contractor shall specialize in the installation of audiovisual systems, have a minimum of five years of documented experience in the field of audiovisual system installation and be a manufacturer approved vendor for all of the components installed.

- C. Supervision: Contractor shall designate a Project Manager and Foreman to oversee the installation work for the duration of the Work, to ensure that the system is installed in accordance with the Specification and Drawings.
 - 1. Project Manager shall maintain adequate staff and be responsible for installing and testing the system on schedule.
 - 2. Project Manager and Foreman/Project Supervisor shall have at least five years of documented, recent and similar project experience.

- D. The Owner reserves the right to make use of the system prior to the completion of the Work. Temporary use of the equipment shall not constitute an acceptance of the system or any part. The Owner shall not pay additional cost to the Contractor and the commencement of the warranty period shall not begin for the system, or any device prior to the completion of the punch list and final acceptance of the system, by the Owner.

- E. Contractor shall promptly notify the Owner, in writing, of any site difficulties that may prevent proper coordination or timely completion of the Work. Failure to do so shall constitute acceptance of Work and indicate that the site is suitable in all ways for this Work, except for defects that may develop in the work of others after commencement of system installation.

- F. Insurance: Provide evidence of insurance for the full value of equipment and material located on-site. Insurance shall cover losses due to fire, theft and vandalism, until the final acceptance of the system, by the Owner. Maintain additional liability insurance to protect the supplier and/or Owner, Architect, Design Consultant against damage claims for personal injury, including death, which may arise during the performance of this work.

- G. The Lead Control System and Audio/Video Digital Processing Programmers in the office and in the field shall be certified as defined by the manufacturer of the equipment utilized.

1.05 REFERENCES

- A. All requirements of the latest published edition, unless otherwise noted, shall apply.
- B. National Electric Code (N.E.C.).
- C. National Electric Safety Code (N.E.S.C.).
- D. Davis, Don, Sound System Engineering, Second Edition, Howard W. Sams and Co., Indianapolis, Indiana, 1997.
- E. American National Standards Institute (A.N.S.I.).
- F. Electronics Industries Alliance (E.I.A.).
- G. Audio - Design and Installation, Giddings, Howard W. Sams, 1990.
- H. Society of Motion Picture and Television Engineers (S.M.P.T.E.).
- I. American Society for Testing Materials (A.S.T.M.).
- J. Dashboard for Controls (AVIXA).
- K. Advanced Dante Configuration, Audinate 2015
- L. AVB Systems (IEEE 802.1BA)
- M. Audio Coverage Uniformity (AVIXA A102.01)
- N. Projected Image System Contrast Ratio (AVIXA 2M)
- O. Cable Labeling for Audiovisual Systems (AVIXA F501.01)

1.06 SUBMITTALS

- A. Contractor shall comply with the General Requirements and General Conditions of this Specification.

- B. Bid Submittals: Contractor shall submit the following qualification documents with the bid proposal:
1. Firm description of the Contractor, and a copy of the Contractor's license, as well as a statement regarding the relationship of the License Holder to the Contractor.
 2. Provide a minimum of ten related projects, four of which must have been completed within the last 12 months.
 3. Résumé of Project Manager and onsite Foreman/Project Supervisor documenting related experience. Foreman/Project Supervisor must have completed at least two similar installations in the past 12 months. Indicate any certifications held by the Project Manager and onsite Foreman/Project Supervisor such as PMP/CTS-I or other.
 4. Project Manager and Foreman/Project Supervisor cannot be changed without approval of Owner.
 5. Submit a list of major equipment components, along with any deviations, to the system design and Specification. Indicate which products will not be purchased directly from the manufacturer.
 6. Submit a list including names, firm description, job foreman, copy of license and scope of work, for any subcontractors whose work would be part of this Contract.
 7. Submit a list of names for the lead installers who will be working on this project and indicate for each, if they are NSCA NICET/EST or ICIA CTS-Install, certified or registered.
- C. Construction Submittals
1. Provide shop drawings and record drawings using the following scales:
 - a. Plans - not less than 1/8" = 1'-0"
 - b. Details - not less than 1/4" = 1'-0"
 2. Before ordering equipment, submit catalog data sheets, neatly bound with title page, space for submittal stamps and tabbed dividers between sections. List all proposed equipment with reference to corresponding specification paragraph numbers or equipment title. Denote all approved substitutions. Data sheets may also be delivered in a single flattened PDF format file if physical delivery is not practical.
 3. Submit point-to-point wiring diagrams and typed wire lists identifying every connection. Include electronic devices such as switches, transformers and terminal blocks. Indicate location of all components. Identify cables by types, colors and wire numbers. Diagrams must be original documents, coordinated with other trades. Replication of any bid documents is not acceptable.
 4. Submit system plans showing all device locations.

5. Submit reflected ceiling plans showing distributed loudspeaker layouts with wattage tap settings, projection systems, cameras and other ceiling mounted devices.
6. Submit conduit riser diagrams showing connection of all devices along with types and quantities of cables to be used and cable identification tags.
7. Submit rack layouts indicating the proposed arrangement of mounted equipment including junction boxes and locations of conduit penetrations.
8. Submit fully dimensioned construction details of all panels, plates and other custom fabricated items or modifications (e.g. installation of audio/visual equipment in lecterns). Include complete parts lists and, as required, schematic diagrams.
9. Submit fully dimensioned construction details of all coordination items, such as panel or plate installation in casework or millwork as needed to complete the Work.
10. Submit a schedule of finishes indicating proposed materials and color selections for all exposed items subject to Architect's approval.
11. Submit samples of engraved labels, cable-marking system, faceplate etching/finishes and loudspeaker grilles.
12. Submit mounting and support details for distributed ceiling loudspeakers, video projectors and all other items mounted overhead, complete with parts lists and dimensions. Include a full plan view, front elevation and side elevation of each item, with corresponding support structure and mounting hardware. Verify load ratings of all hanging components including attachment hardware. A structural engineer registered in the State shall stamp details.
13. Submit a list showing coordination of selected frequencies for all wireless transmitters.
14. Submit an Excel list showing all equipment requiring data connections. At a minimum identify the following fields, Location, Description, MAC address, Jack number, IP Address, Subnet Mask, Gateway, DNS. Submit list with first three items completed for submittal review, include jack number as well if available. Include items on client LAN as well as AV LAN. Once approved, provide client LAN list to owner's networking group to obtain IP information. Maintain list throughout project and provide final list with as-built documents.
15. Before final control system program installation, submit interactive demonstrations of all control system touch panel pages as well as an electronic copy of the pages as required by Part 3 of this Section.
16. Submit a key schedule indicating key assignments and groupings for all equipment racks, drawers, and lecterns subject to Owner's approval.

- D. Acceptance Test Submittals: Prior to requesting the completion of the acceptance tests, submit Preliminary Test Report Information required in Part 3 of this Section.

1.07 PROJECT CLOSE OUT

A. General

1. Furnish one initial set of Project Close Out Documents including but not limited to manuals, record drawings along with the results of all source quality control tests, and field quality control tests specified in Part 3 of this Section, to the Design Consultant, for use during acceptance testing.
2. If 'as installed' documents are rejected, correct and resubmit in the manner specified.
3. One set of B size drawings showing the components and wiring in each individual rack shall be mounted in a plastic jacket to the rear door of the associated rack.
4. After approval of 'as installed' documents, submit sets of record drawings as follows:
 - a. One set of full-size prints
 - b. One set of reduced B size prints
 - c. One set of manuals
 - d. Four electronic submittals on CD-ROM/DVD disk(s).
5. At the time of contract closeout, submit sets of the system Operation Manual and the Maintenance Data Manual as follows:
 - a. One set hardcopy for owner.
 - b. Four sets electronic on CD-ROM/DVD disk(s).

B. Manuals

1. Neatly bind each manual with tabbed dividers between sections, include a title pages between sections, binder title covers and spines.
2. Manuals shall be presented in 3 ring – D style binders.
3. The Manuals shall be broken down into the following minimum sections:
4. Operations Manual
 - a. Table of Contents
 - b. Typed description of each system including key features and operational concepts (e.g. remote control features, switching or routing functions, patch points, mixing and linking capabilities).
 - c. Setup diagrams and typed instructions for use in typical situations as directed by the Design Consultant.
 - d. Single-line block diagrams showing all major system components.
 - e. One set of B size drawings showing the components and wiring in each individual rack.

- f. Manufacturer's operation manuals for equipment intended for operation by system users (e.g. source equipment, communication equipment, etc).
 - g. Manual must be an original document created by the Contractor. Replication of any bid documents is not acceptable.
 - 5. Maintenance Data Manual
 - a. Table of Contents
 - b. Company name, address, telephone number and contact name for system service or maintenance.
 - c. Listing of all equipment and materials with names of manufacturers and model numbers or part numbers.
 - d. Catalog data sheets displaying manufacturer's names, addresses and telephone numbers.
 - e. Product manufacturer's warranties and a typed, one-year system warranty, explicitly covering all materials and labor.
 - f. Manufacturer's service manuals for all major equipment items.
 - g. Test documentation showing results of source quality control tests, field quality control tests, acceptance testing and equalization.
 - h. Document final settings for all non-user devices and controls after completion of acceptance testing and equalization, including raw and equalized house curves.
 - i. Document the physical position of settings as well as input and output signal levels as required by Part 3 of this Section.
 - j. Provide a recommended preventative maintenance schedule for reference to the applicable pages in the manufacturer's maintenance manuals. Where the manufacturer provides inadequate information, develop and provide the information necessary for proper maintenance.
- C. Software
 - 1. A properly licensed working copy of any and all software required to operate or configure the systems specified herein, shall be a part of the system supplied, including all software, firmware and hardware required for configuration, adjustment, diagnosis and repair.
 - 2. All software shall be fully documented, and that documentation included.
 - 3. Software shall be included in its 'installable' state on industry standard, CD-ROM/DVD, or other appropriate format from the manufacturer. Where possible a single master CD-ROM/DVD should be provided. If files are too large, break segments into logical sections, CD-ROM/DVD disk images are unacceptable.

4. Where any elements of the software are based on user modifiable source code, both the source code and the compiler shall be provided and documented as stated herein.
 - a. The source code is to be licensed to the Owner for this project; the contractor maintains the copyright of the source code.
 - b. The Owner has the right to modify the source code.
 - c. If the source code is modified the Owner takes full responsibility for the effects caused by the modification to the source code.

- D. Electronic Submittal: In addition to the above listed hard copy submittals, submit all files necessary to produce the above submittals as follows:
 1. Submit the following on CD-ROM/DVD media.
 - a. Files use long windows names file structure.
 - b. A Disk Master File List in text format shall be placed on the CD-ROM/DVD with a short description of files on that disk.
 2. Drawings shall be in AutoCAD r2000 or later drawing (.DWG) format. Drawing Exchange File Format (.DXF) shall not be acceptable. All XREFs, fonts, and other drawing parts necessary to the drawings shall be included.
 3. Documents and spreadsheets shall be in Microsoft Office .docx/.xlsx format.
 4. All files to be converted to searchable acrobat *.PDF files in addition to the native drawing, documents and spreadsheets formats.
 5. Manufacturers' service manuals provided by the Manufacturer to the Contractor or documents that are similarly, not otherwise available to the Contractor in electronic format shall be excluded from this requirement.
 6. Provide all control system source files and compilers on the same CD-ROM/DVD media. This should include, but is not limited to, touch panel files, IR code files, DSP configuration files, web-based touch panel pages, or any other files or applications necessary to completely reinstall and configure all system components back to their operable state.

- E. Keys: Submit five sets of all keys required for access to and operation of the systems.

1.08 GUARANTEES AND WARRANTIES

- A. Transfer all manufacturer and subcontractor's warranties to the Owner at the completion of all Work.

- B. Guarantee all installation work to be free of faulty system-wide workmanship. Guarantee all new components purchased under this Contract and workmanship

to be free from defects for a period of 12 months from the final date of acceptance, by the Owner, including solid-state devices.

- C. Guarantee a response window of 2 hours for call-back phone support upon notification from the owner of a system operational issue during the warranty period.
- D. Guarantee the on-site replacement of faulty materials and workmanship within 24 hours of notification at no cost to the Owner if failure occurs during warranty period. Provide loaner equipment as required to keep the system operational if the system cannot be repaired within 24 hours of notification.
- E. Register warranty in the Owner's name for any product with a manufacturer's warranty of more than one year.

1.09 OWNER FURNISHED EQUIPMENT

- A. Certain equipment may be identified as Owner Furnished Equipment (OFE). This OFE may presently be part of the Owner's systems or will be provided by the Owner and will be delivered to the Contractor's off-site construction facility, delivered to the Contractor's on-site secured storage area or installed on site by others, as appropriate, for incorporation into the system.
- B. Clean and inspect the OFE, and notify the Owner in writing of damage or defect and the extent of repair and/or adjustment required to bring the OFE to original specification. Service OFE only as directed by the Owner under the arrangements of a separate contract.
- C. Incorporate into the system as if provided new, excepting warranty coverage.

1.10 MAINTENANCE

With the bid, submit an annually renewable service and maintenance proposal for a total of two additional years meeting the same conditions for service and repair as required for the initial one-year warranty. If accepted, the service and maintenance proposal shall commence upon conclusion of the one-year system warranty.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Components are to operate on standard US voltage outlets. Rack mounted equipment is to be mounted in a standard EIA 19-inch wide rack. The components listed in the equipment schedule are the basis of the audiovisual system design and represent the minimum standards for each of the components. All of the properties of each component or system should be considered listed in full.
- B. Equipment, excepting the Owner Furnished Equipment (OFE), and materials shall be new. The latest version at time of delivery and shall conform to applicable UL, CSA, or ANSI provisions. Take care during installation to prevent scratches, dents, chips, etc.; equipment with significant or disfiguring cosmetic flaws will be rejected.

2.02 CABLE

- A. General
 1. Conductor jackets shall be color-coded to enable consistent polarity.
 2. Use plenum rated cable where required by code.
 3. Cables noted are referenced for minimum level of quality.
 4. Use outdoor or wet rated cables where required. Size may vary depending on distance requirements.
 5. Acceptable Manufacturers: West Penn, Canare, Belden, Extron, Covid, Gepco, and Liberty.
- B. Audio Cables
 1. Microphone: Shielded, stranded 20 AWG, twisted-pair cable (West Penn 292)
 2. Line Level Cable: Shielded, stranded 20 AWG, twisted-pair cable (West Penn 292)
 3. Program Loudspeaker Cable: Stranded, twisted-pair 12 AWG cable (West Penn 227)
 4. Distributed Loudspeaker Cable: Stranded, twisted-pair 16 AWG cable (West Penn 225)
 5. UHF Wireless Antenna Cable: 50 ohm, (RG-58) coaxial cable (RG-58) (Belden 8259)
 6. Digital Audio Transport Cable: 4 pair Category 6 Solid Twisted Pair cable, 24 AWG. (West Penn 4246)
- C. Video Cables
 1. MATV Drop Cable: 75 ohm RG 6U co-axial cable (West Penn 256350)
 2. MATV Trunk Cable: 75 ohm RG 11U co-axial cable (West Penn 25811)
 3. High Resolution Cable DVI (Single-link): 100-ohm multiple conductor cable in one jacket (Extron DVID SL Pro Series)

4. High Resolution Cable DVI (Dual-link): 100-ohm multiple conductor cable in one jacket (Extron DVID DL Pro Series)
 5. High Resolution Cable HDMI: 100-ohm multiple conductor cable in one jacket, 18Gbps data rate (Extron HDMI Pro/Ultra Series)
 6. Digital Media Transport Cable: 4 pair Category 6A (S)F/UTP cable, 24 AWG, 500MHz bandwidth. (Belden 10Gx series/Extron XTP DTP-24)
 7. HDMI Bulk Cable: 100-ohm multiple conductor cable in one jacket, 28 AWG. (Covid LUX-HD-28RD)
 8. HD/3G/6G-SDI Cable: Low loss serial digital co-axial cable RG-6/RG-11 (Belden 1695A/7732A)
- D. Data / Control Cables
1. Control System Cable: 2 pair (18 AWG pair and 22 AWG pair) (Liberty AXLINK)
 2. Data cable: 4 pair Category 6A Solid Twisted Pair cable, 24 AWG. (West Penn 4246A)
 3. RS-485 cable: 7-conductor, 22 AWG cable. (Belden 9430)
 4. RS-232 cable: 7-conductor, 22 AWG cable. (Belden 9430)
 5. 5 pair, Stranded Twisted Pair Shielded, 24 AWG cable. (Belden 9807)
 6. 9 pair, Stranded Twisted Pair Shielded, 24 AWG cable. (Belden 9809)
 7. 12 pair, Stranded Twisted Pair Shielded, 24 AWG cable. (Belden 9812)
 8. USB Revision 2.0 Compliant Bulk Cable: Two 24 AWG power conductors plus one 28 AWG twisted pair for data lines (L-com CBL-USB2-2824)
- E. Multimode Optical Fiber Cable
1. All multimode optical fiber cable must be OM4 rated and strands must have an outside cladding diameter of 125 micrometers and an inside core diameter of 50 micrometers with a dual operational wavelength of 850 nanometers and 1300 nanometers.
 2. All multimode optical fiber cables shall be OM4 OFNP-rated, and all cable jackets shall have the OM4 standard aqua coloring, that is constructed with a dielectric armor for protection, unless otherwise noted.
 3. Multimode Optical Fiber Cable Manufacturer and System Description:
 - a. Corning MIC Armored Cable System
 - b. CommScope Cable System
 - c. BerkTek Cable System
- F. Single-mode Optical Fiber Cable
1. All single-mode optical fiber cable must have industry standard outside cladding diameter of 125 micrometers and an inside core diameter between 8 and 9 micrometers with a dual operational wavelength of 1310 nanometers and 1550 nanometers.
 2. All single-mode optical fiber cable shall be OS2 OFNP-rated, have the

industry standard yellow jacket, and be constructed with a dielectric armor for protection, unless otherwise noted.

3. Single-mode Optical Cable Manufacturer and System Description:
 - a. Corning MIC Armored Cable System
 - b. CommScope Cable System
 - c. BerkTek Cable System

G. Category-6 Copper Patch Cords

1. All patch cords are to be shipped pre-assembled, verified and tested from the factory in sealed packages.
2. All copper patch cords shall have stranded conductors that match the TIA/EIA-568-B performance characteristics of the solid conductor category-6 cable specified.

H. Multi-mode Optical Fiber Patch Cords

1. All multi-mode optical fiber patch cords must be LC type cords or combinations as required.
2. All fiber patch cords shall match the performance characteristics of the premise fiber cable specified.

2.03 HARDWARE

A. Jacks, Connectors, and Adapters

1. Provide panel mounted isolated ground jacks.
2. Contacts are to be silver-plated, chromate dipped, phosphor bronze, or brass.
3. Install connector and jacks per manufacturer's directions.
4. Panel mounted jacks are to be recessed.
5. Acceptable Manufacturers: Canare, Switchcraft, Neutrik, Amphenol, Pomona, Extron, Covid, L-com, or Liberty.
6. HDMI Type-A connector: 28 AWG DIY connector/clamshell for round cable (Covid LUX-DIY-28DS10).
7. USB Type-A connector with hood: gold-plated solder contacts, nickel-plated steel shell, and UL94V-0 rated housing (L-com USBCN2.0-A, USBHD2.0-A).
8. USB Type-B connector with hood: gold-plated solder contacts, nickel-plated steel shell, and UL94V-0 rated housing (L-com USBCN2.0-B, USBHD2.0-B, USB-C).
9. Category 6a Shielded Keystone Style Jacks and plugs

- B. Audiovisual System Face Plates: Provide metallic cover plates at all control, switching and jack locations. Etch and ink all system faceplates to indicate function, input/output number, etc. Minimum engraved letter height 1/8 inch.

Coordinate finish with the Owner. Center lettering vertically over or horizontally to the right of the appropriate connector. Connector mounting shall allow sufficient finger clearance for connector insertion and removal without interference from adjacent connectors.

- C. Electronic Component Face Plate Labels: Provide permanent labels as specified and shown on detail drawings. Engraved plastic labels fastened with epoxy are acceptable. Dymo type labels are not acceptable.
- D. Provide a neatly labeled floor plan with as-built locations of all audiovisual jacks. Locate floor plan in front cover of the equipment rack behind a clear Plexiglass cover. Minimum size of chart: 8-1/2 inches x 11 inches.
- E. Provide system functional description and operating procedures for each system configuration. Place behind clear Plexiglass near each of the equipment racks. Include basic operating procedures and troubleshooting steps.
- F. Provide a 1-rack unit panel with Consultant's name and web address and Contractor's name, address and phone number in the main equipment rack of each system. Panel shall state: Designed by "Consultant" Installed by "Contractor".

2.04 RACK SYSTEMS

- A. All audiovisual racks on the project are to be welded and from one manufacturer.
- B. Racks are to be rated for the Uniform Building Code Seismic zone 4.
- C. Racks and rack accessories are to be black in color.
- D. Rackplates: All custom rack plates are to be fabricated from 16 Gauge Aluminum with flange returns. All rack blanks and vents are to have flanges.
- E. Racks are to have moveable rear rack rails. All rack rails are to be tapped for 10-32 machine screws.
- F. Racks are to have a modular top option with different knockouts and openings as required by the design documents.
- G. Front and rear vented locking doors are required for all racks not directly secured by casework or other architectural door system.

- H. Rack slides shall be provided for all equipment requiring access to side or top panels for routine adjustment or cleaning.
- I. Provide security covers on non-user operated equipment having front panel controls.
- J. Install all rack mounted equipment with black oxide finish 10-32 oval head machine screws with black plastic cup washers protecting equipment panel.

2.05 RACK POWER

- A. Provide switched and constant power strips as specified, divided among the following categories.
 - 1. Provide constant power outlets for all equipment that requires it. This includes CATV tuners, digital audio/video processors, streaming transmitters, network switches, and other devices that require a boot process prior to use.
 - a. Rack systems will each be provided with vertical power strips for constant power distribution. Strips containing signal processing equipment will be run to rack UPS systems specified rather than building power.
 - 2. The remaining outlets are to provide switched power operated by the control system.
 - a. Multiple amplifiers on the same circuit shall power up with a minimum of a 2 second delay between each.
 - b. The system is to be free of measurable power transient noise when powering on or off.
 - 3. Equipment with redundant power supplies will have independent building power circuits for each supply.

PART 3 - EXECUTION

3.01 GENERAL

The following is required for acceptance of the audiovisual system by the Owner:

- A. Install complete and functioning audiovisual system.
- B. Label equipment and cables corresponding to functional diagram.
- C. Conduct adjustments and preliminary testing.

- D. Report results of Site Acceptance Testing (SAT) and preliminary testing along with system documentation.
- E. Participate in acceptance test and deliver final system and documentation.
- F. Conduct any adjustments or re-testing required to meet the performance specifications.
- G. Provide training to an individual(s) designated by the Owner/Architect/Consultant.

3.02 AUDIOVISUAL OPERATIONAL REQUIREMENTS

Care shall be taken to eliminate electro-magnetic radio frequency and electro-static interference; the system shall be free of audible hum, rattles, buzzing sounds, distortion and visible hum bars or distortion.

3.03 CABLE WIRING STANDARDS

- A. General
 - 1. Provide proper cable management and support
 - a. Install cables in an organized manner.
 - b. Dress cables neatly.
 - c. Route cables parallel to the product in which they are landed. This should result in cables that are routed plumb and level and change directions in 90° increments.
 - d. Secure cables to wire management products using reusable hook and loop type fasteners. Secure fasteners to the wire management product then wrap fastener around the cable bundle. Provide sufficient length of fastener wrap to extend around the final cable bundle side with at least 75 percent of the bundle circumference overlapped.
 - e. Do not use nylon cable ties or other fasteners that pinch and stress cables. Do not use ties that require tools to remove.
 - f. Do not bend cables to a radius that is less than 8-times the cable diameter, nor less than the cable manufacturer's recommended minimum bend radius.
- B. Equipment Racks
 - 1. Provide vertical and horizontal wire management products to secure and manage cables.

2. Provide horizontal wire support bars. Secure bars in such locations as to achieve a professional balance between cable support, equipment accessibility, service, and appearance.
3. Install service loops. The length of service loops for each device shall be:
 - a. Long enough that the cable may be relocated to a variety of other compatible ports on the product.
 - b. Long enough to be moved aside without becoming unplugged, being damaged, or stressed while attempting to access another nearby connection.
 - c. Long enough that no stress is applied to the cable itself, a conductor, another cable, or connectors on the equipment.
 - d. Short enough not to hinder serviceability of an adjacent device.
4. Provide security covers on non-user operated equipment having front panel controls. Install security covers at the conclusion of Acceptance Testing. Rack slides shall be provided for all equipment requiring access to side or top panels for routine adjustment or cleaning.
5. Provide rack slides and mounts equal to those of the original manufacturer for the OFE requiring rack mounting. Where no same manufacturer mount is available, Contractor shall supply custom mounts as manufactured by Middle Atlantic Products Inc.

3.04 AUDIO DSP (Digital Signal Processing) PROGRAMMING

- A. The Contractor will ensure that:
 1. Each DSP block has a description of its function.
 2. Each DSP block has fully labeled endpoint nodes
 3. Each DSP block with control dialogs has each channel labeled in a clear and concise manner to allow for simple signal identification.
- B. The values in the audio DSP box shall be set to allow the performance requirements outlined in this document to be met.
- C. Microphone mute shall be at DSP, not at microphone. If wireless microphones are muted at the transmitter the control system will mute the appropriate channel in the DSP. Un-muting the transmitter will un-mute the associated channel as well.
- E. Active signal from Fire Alarm (By Others) mutes the audio system.
- D. Proper gain structure practices shall be used. Signals will be brought to optimum levels upon entry to the DSP, and care will be taken to minimize level changes within the DSP signal path.

3.05 CONTROL SYSTEM PROGRAMMING

- A. Contractor shall provide all touch screen and control system programming to make fully functional and working systems. System functional requirements shall be as described in these documents.

- B. The contractor shall closely collaborate with the owner and designer through a multi-phased interactive process lead by the contractor.
 - 1. Phase I – Needs Analysis
 - a. This phase shall be used to refine the general expectations of the system(s) functionality from a high level perspective.
 - b. One or more meetings shall be expected.
 - c. Contractor will provide the Owner with 3 screen layout samples for aesthetics. Owner shall determine which layout will be used.
 - 2. Phase II – User Interface (UI) Development
 - a. Contractor will create user interfaces for each system based upon the needs analysis.
 - b. User interfaces shall be similar to any existing campus standards to allow for ease of use.
 - c. All user interface designs shall follow interface design fundamentals. Lighting, color, and contrast shall be used consistently and effectively. All interface elements shall be easily viewable and controls easily selectable. All panels on the project shall have the same template and functional flow unless otherwise stated by the Designer and Owner.
 - d. Contractor will create a software emulation of the interface design that mirrors the final operational and navigational flow, behavior, and general responsiveness.
 - i. Emulation shall include full system navigation, button feedback, device and system status emulation, working page flips, popups, and messaging.
 - e. This phase is complete when the contractor has conducted working hands-on user interface demonstrations with the owner and designer and received acceptance from both.
 - 3. Phase III – Programming
 - a. Contractor will write system code based on feedback from the GUI demonstration and system specifications/requirements.
 - 4. Phase IV – Final Check Out
 - a. Changes will also be made during system check out. Budget for one 8-hour days of touch screen and system-programming changes during the system check out.

- C. General Requirements
1. All devices able to be controlled over LAN will be. This is a majority of AV equipment. Any equipment without a network port is excepted.
 - a. Any further exceptions must be approved by the Designer.
 2. Each touchpanel will have a start page with a client supplied PNG format logo
 3. True feedback will be used for system status at all possible points. Emulated feedback is not acceptable for:
 - a. Display/projector status
 - b. Volume levels
 - c. Source routing
 - d. Microphone mute status/privacy
 4. All panels will have a prominent 'Help' button on each main page which will alert support staff of an issue, as well as a 'Cancel' button which will clear the help request in cases of an accidental button press. This button will be available to users at any point within the UI and not require multiple button presses to navigate to.
 5. Buttons shall be icon driven with smaller text for identification similar to mobile devices (iOS/Android/Windows 10).
 6. Warm up and cool down timing for projectors and displays will be determined by timing startup and shutdown of the specified equipment, then setting appropriate times to reliably allow warm up and cool down to complete undisturbed by additional system commands.
 7. Common user commands shall be accessible with no more than two button presses. Common commands would include source selection, display/projector power, volume, transport controls, or similar.
 8. Care shall be taken to minimize page flips on the UI. Subpages and pop-ups shall be utilized where possible to prevent users from stepping through multiple pages in order to execute commands.

3.06 PERFORMANCE SPECIFICATIONS

- A. The sound pressure level spectrum from the program speaker system, in each 1/3 octave band shall be ± 3 dB (side to side) from 100 Hz to 12 kHz with 3 dB per octave roll off above 12 kHz and below 100 Hz. Total acoustical harmonic distortion shall not exceed 2% at sound levels of 90 dBC (1 kHz reference tone) at four (4) feet above finish floor in the middle of the room.
- B. The sound pressure level spectrum from the distributed speaker system, in each 1/3 octave band shall be ± 3 dB from 125 Hz to 10 kHz with 6 dB per octave roll off above 10 kHz and below 125 Hz. Total acoustical harmonic distortion shall not exceed 2% at sound levels of 85 dBC (1 kHz reference tone) at four feet above finish floor in the middle of the room.

- C. The gain structure for all audio system components (mixer input to amplifier output) shall be adjusted to achieve the highest signal-to-noise ratio, 75 dB from 50 Hz to 15 kHz minimum.
- D. The audio frequency response of the electronics system with equalizers bypassed shall vary less than ± 1 dB from 50 Hz to 12 kHz.
- E. The electronic system audio distortion shall be less than 0.5% at 1 kHz at the equipment's rated input signal level.
- H. High Resolution Digital Video
 1. System infrastructure must support data rates up to 23 Gbps and pixel clock up to 594Mhz.
 2. System infrastructure must support resolutions up to 4KDCI and 4KUHD @ 60 Hz 4:4:4 chroma sampling and 10-bit color depth (HDR capable)
 3. Extended Display Identification Data (EDID) shall be supported.
 4. System shall be High-bandwidth Digital Content Protection version 2.0 (HDCP) compliant.
 5. System shall manage HDCP encryption and keys between input and output devices for fast switching and distribution of a single source signal to one or more displays.
- I. Image size and clarity: Mount the video projector as indicated on the drawings and project the image onto the projection screen. Projected images shall be of maximum width and maximum height, centered on screen. Image tests shall utilize standard AMI test slides and similar video media to establish any image sizes on the screen.
- J. Geometric Distortion: Shall be corrected using physical and/or optical adjustment only. Electronic or digital correction should be used only when called for by the design intent.
- K. Adjacent displays and projected images will be calibrated to match in color saturation and brightness/contrast.
- L. Control functions: Demonstrate that each of the controlled devices may be controlled either at the individual device or through the use of the remote control system and that all individual devices and combinations of devices may be utilized in the logical and common formats and that all systems are in proper working order.

3.07 CONTRACTOR'S TESTING AND ADJUSTMENTS

- A. Furnish all equipment and personnel including manufacturer's representatives to perform manufacturer's Site Acceptance Test (SAT) and to conduct these tests in accordance with the performance specification requirements.
- B. All timing and gain measurements shall be made while the operator controls of the device under test are set in the center-of-travel, in bypass, nulled out or at the manufacturer's detent position. Any adjustments should be made by modification of cable length or internal adjustments.
- C. Audio Testing
 1. Before connecting high impedance loudspeaker lines to the power amplifiers, measure and record the impedance curves of all loudspeaker circuits, using a sweep test or impedance bridge for at least six frequencies from 125 Hz through 8,000 Hz.
 2. Before connecting low impedance loudspeaker lines to the power amplifiers, measure and record the impedance of all loudspeaker circuits, Report the DC resistance reading.
 3. Test all low-level audio cables and connections for continuity and ground faults and correct polarity.
 4. Apply a sine-wave sweep signal to each loudspeaker system, sweeping from 50 Hz to 5,000 Hz at a sound pressure level, which is 10 dB below the loudspeakers rated electrical input power. Listen for rattles or objectionable noise and correct if apparent.
 5. Check for proper polarity of loudspeakers by applying music program or pink noise to each system and walking through the transition areas of coverage from one loudspeaker to the next. Transition should be smooth with no apparent shifting of source, back and forth from one loudspeaker to the next.
 6. Coverage Uniformity: Scan and map the areas (Front: Left, Center, Right; Center: Left, Center, Right; Back: Left, Center, Right and Balcony: Left, Center, Right) served by the system and record sound pressure level in 1/3-octave bands. Perform any necessary adjustments to loudspeaker orientations as required to achieve the specified uniformity.
 7. Adjust all system gain controls, both physical and virtual in software, for optimum signal-to-noise ratio. After all adjustments required to meet the performance Specification requirements are made, measure and report the resulting system electrical signal-to-noise ratio at the amplifier outputs from 20-20 kHz in 1/3 octave bands referenced to the voltage required to achieve 85 dBC in the center of the room (1 kHz reference tone) at 4-feet above finish floor.

8. Measure the sound pressure level using a calibrated type 1 precision sound level meter as defined by ANSI S1.4. Measure using the slow time Constant. Report the "raw house curve" with the equalizer controls set to "0" or "Bypass". Adjust all gain controls and equalizers to provide the 1/3-octave band sound levels specified.
- D. Video Testing
1. Verify and document performance of all video cables and connections by injecting full SMPTE color bars and a multiburst signal. Monitor performance on a calibrated waveform monitor. Confirm that all signal paths maintain a full 140 IRE signal and that frequency response is flat across a 6 Mhz band-range. Continuity tests will not be acceptable.
 2. Check all paths and outlets for appropriate compliance with the Performance Standards. Measure levels at all termination points. Compare actual values to design calculations and investigate any difference. Rectify or justify these discrepancies to the satisfaction of the Owner. In all cases, the more stringent of any referenced standard shall apply.
 - a. Video timing and phasing shall be achieved using the fewest delay lines, delay distribution amplifiers and other delay devices possible. At all times, match cable lengths between like paths to minimize timing errors. To the maximum extent possible, utilize precisely cut cables to achieve correct timing and phasing.
 - b. Verify performance of all video connecting cables, as specified herein. Continuity tests are not acceptable. Passive paths shall be tested by sweep or multiburst signals. Replace any defective cable without claim prior to continuing tests.
 - c. System Timing: All video signals shall be in time as specified above, without readjustment of source phasing, delay lines, delay distribution amplifiers, or equalizers for the downstream equipment.
 3. Although some delay units (active or passive) may be shown on the video functional block drawing to achieve the required video timing, the Contractor shall be responsible for providing all such units that may be required to meet these performance specifications. In all cases, minimize the number of delay lines. Keep cable lengths equal to achieve timing.
 4. All signal paths from primary-source (video) equipment to the final distribution amplifier shall demonstrate unity gain of 1-volt peak to peak (140 IRE +2 IRE). This measurement shall be made with the SGE blanking processor and the final processing amplifier both set to bypass.
- E. Manufacturer's Site Acceptance Testing (SAT)
1. Testing of every channel of each I/O module with calibrated equipment.

2. Verification of electrical characteristics, depending on the I/O module type and specifications (voltage/current levels, signal-to-noise ratio, etc.)

3.08 DATA CABLE TESTING

- A. The Contractor shall be responsible for all testing and performance parameters required by this section and all applicable TIA/EIA-568-C series standards.
- B. Furnish all equipment and personnel to conduct these tests in accordance with the performance section requirements.
- C. Prepare Test Reports Manual as described in this section documenting the results of these tests and readings.
- D. Test results must be submitted to the Owner as part of the project documentation prior to acceptance as required by this section.
- E. Testing of copper wiring shall be performed prior to system cutover (100 percent of the horizontal and riser wiring pairs shall be tested for opens, shorts, polarity reversals, transposition and presence of AC voltage).
- F. Any pairs not meeting the requirements of the standards shall be brought into compliance by the Contractor, at no charge to the Owner.
- G. Category-6A data cable test procedures must comply with and meet the following standards:
 1. TIA/EIA-568-C
 2. NEMA Low Loss extended frequency requirements
 3. Any additional Owner standards attached to general conditions
- H. Complete four pair testing must be performed with full sweep frequency measurements from 1 MHz to 500 MHz, and the Power Sum Far End Cross-Talk test. This test will establish each channel's installed performance measurement. This is not a certification or compliance test, rather a measure of available headroom. Any copper cable failing to meet the above-indicated standards must be removed and replaced, at no cost to the Owner, with copper cable that proves in testing to meet the standards.
- I. Test all Category-6A cables with a third party approved tester noted above. The testing device must be provided by the Contractor and approved by the Owner's representative prior to use. It is the responsibility of the Contractor to get written authorization from the Owner's representative to commence testing with said device.

- J. All cables are to be tested for:
1. Continuity
 2. Polarity
 3. Insertion Loss
 4. Length
- K. Test procedure - Category-6A cables
1. All CAT-6A cables shall comply, must be tested, and meet the following TIA/EIA-568-C standards:
 - a. Insertion Loss
 - b. Near End Cross talk (NEXT)
 - c. Power Sum Near-End Cross talk (PSNEXT)
 - d. Attenuation to Crosstalk Ratio – Near End (ACRN)
 - e. Power Sum Attenuation to Crosstalk Ratio – Near End (PSACR-N)
 - f. Far End Crosstalk (FEXT)
 - g. Power Sum Attenuation to Crosstalk Ratio – Far End (PSACRF)
 - h. Return Loss (RL)
 - i. Wire Map
 - j. Propagation Delay
 - k. Delay Skew
 - l. Length
- L. Test procedure - fiber data cabling:
1. All fiber testing shall be performed on all fibers in the completed end-to-end system. There shall be no splices. Testing shall consist of a bi-directional end-to-end power meter test performed per TIA/EIA-568-C. The Contractor shall test all fiber cable prior to the installation of the cable. The Contractor shall assume all liability for the replacement of the cable should it be found defective at a later date.
 2. Loss budget:
 - a. Fiber links shall have a maximum loss of: $(\text{allowable cable loss per km})(\text{km of fiber in link}) + (.4\text{dB})(\text{number of connectors}) =$ maximum allowable loss.
 - b. A mated connector-to-connector interface is defined as a single connector for the purpose of this section.
 - c. Loss numbers for the installed link shall be calculated by taking the sum of the bi-directional measurements and dividing that sum by two.
 3. Any link not meeting the requirements of the standard shall be brought into compliance by the Contractor, at no charge to the Owner.

4. Optical fiber splices, fusion or mechanical, shall not exceed a maximum optical attenuation of 0.3dB when measured in accordance with ANSI/TIA/EIA--455-34, Method A (factory testing) or ANSI/TIA/EIA--455-59 (field testing).
5. The testing of all Fiber optic cables must include tests using an Optical Time Domain Reflectometer (OTDR) or other Owner and Owner representative-approved test equipment. Documentation of the signature trace of the cable must include each of the following:
 - a. Attenuation per kilometer
 - b. Total length of each strand
 - c. The length of the longest cable run from each closet must be recorded and entered into the projects cabling database
6. The test results must include the loss generated by each connector. Loss should be stated in dB. No fiber optic link will be accepted with a loss greater than 2dB.
7. Insertion Loss testing must be done using hand held units for the source and meter. Acceptance tests for all fiber strands shall include attenuation, attenuation uniformity, and end-to-end integrity. The Contractor is to ensure that losses are within budget levels. These tests shall be accomplished and documented using loss sets at the desired wavelength of 1300 and 850 NM. The loss test should be performed after all splicing, connectorization and interconnection has been completed. Loss tests should be zeroed using the test lead to be used making the measurements.

3.09 ACCEPTANCE TESTS

- A. Provide a STATEMENT OF COMPLETION, certifying that the system is installed and is ready for acceptance testing by the Design Consultant.
- B. Schedule a time for the Design Consultant to perform system acceptance testing and adjustment with at least 14 days advance notice.
- C. Qualification for Acceptance: Subsequent to completing preliminary testing, Contractor shall furnish the Owner/Design Consultant with copies of As Built documentation as required in this Specification.
- D. Furnish a technician who is familiar with the system to assist the Design Consultant during the acceptance testing and equalization for the duration it takes to complete the adjustments (regular time or overtime as required). A minimum of 24 hours as required to complete the adjustments.

- E. Acceptance Test: The Owner and Design Consultant shall be present during the acceptance testing and require the assistance and cooperation of the Contractor.
 - 1. Each major component shall be demonstrated to function.
 - 2. Measurements: Electrical, optical and acoustical measurements may be performed at the discretion of the Owner and/or their representatives. The Design Consultant will supply acoustical measuring equipment. Such measurements may include sound pressure levels, uniformity of coverage, distortion, or other pertinent characteristics. Contractor shall provide equipment for performing any necessary electrical test or adjustments.
 - 3. Viewing and listening tests may include subjective tests by observers at any location in the facility.
 - 4. Operating tests may include use of any individual or combination of systems provided and from any control location.
 - 5. Each cable may be inspected for proper termination.
 - 6. Under the direction of the Design Consultant, adjust signal levels and loudspeaker aiming, as required, to achieve the uniform sound distribution required by this Specification.

- F. Such tests may be performed on any piece of equipment or system. If any test shows the equipment or system is defective or does not comply with the Specifications, Contractor shall perform any remedies, at their expense, and pay the subsequent expenses of any re-testing required.

- G. Contractor shall provide a final report, which will document the final equipment settings and adjusted levels and values.

- H. If the system does not meet criteria or if additional trips to the JOB SITE for testing or adjustment are required, the Contractor shall reimburse the Owner for all expenses and professional time encountered by the Design Consultant/Architect.

3.10 OWNER PERSONNEL TRAINING

- A. As part of Work of this Section, provide a total of 16 hours of on-the-job training for personnel, designated by the Owner for instruction, in the proper operation and maintenance of the systems. This training shall take place after acceptance testing, in four (4) two-hour blocks.

- B. The contractor shall record two (2) end user training sessions and provide a digital hard copy on DVD disc as well as mpg4 format to the owner and design consultant.

- C. Provide the additional eight hours of training in a minimum of two-hour blocks during the first year after the system has been accepted. These training sessions are at the request of the owner.
- D. Provide one initial set of manuals for the system as described in this specification at the time of training for review and comment by the owner's personnel.

PART 4 - BIDDING INSTRUCTIONS

4.01 GENERAL

- A. This section provides the bid format for the project's audiovisual system. This bid form is to be completed in its entirety. Failure to provide information required by this document may be considered grounds for immediate disqualification.
- B. The installation of the audiovisual system is based on the attached design documents that describe the design developed by Thorburn Associates.
- C. All equipment substitutions must be equal to or better fully functional replacements of the specified items. This includes items such as rack mounting requirements, software operating requirements, functional features, maintenance features and warranty length. Any substitutions must be approved in advance by the Designer.

4.02 BID FORM

Provide the following documentation with your bid:

- A. Refer to bid submittal section 1.06 B for bid submittal requirements. Attach all required information.
- B. Provide a schedule indicating the number of workdays to install the system after each major sign-off by the Owner (i.e., after the bid is awarded, how many days to submit shop drawings, how many days after approval of shop drawings prior to construction, etc.) through the end of the project. Schedule shall be broken down as required by bidding firm's policies.
- C. Provide a copy of your standard contract for materials and installation services.
- D. A statement indicating all equipment is readily available. If not, provide a recommended solution as an alternate.

- E. Provide a bid for to install a complete and operational system. "Complete and operational" is defined as tested and adjusted per design documents.
- F. Complete bid form information called out in parts of this specification.
- G. Return one additional courtesy copy of the completed bid form and all required documentation to Thorburn Associates, 2500 Gateway Centre Blvd, Suite 800, Morrisville, NC 27560.

PART 5 – MAJOR EQUIPMENT LIST

5.01 GENERAL

- A. The following items are the owners preferred items. Any proposed changes need to be identified during the bidding period.
- B. It is the contractor's responsibility for all additional design work to show that the proposed change provides the same functionality and quality as the owners preferred items.

5.02 BREAKDOWN

- A. Provide Unit Cost for each item listed below.
- B. Provide a list of other equipment and hardware required for a complete and working system.
- C. Provide Total Line Cost for each item listed below based on quantity.
- D. Provide the following line item and unit costs:
 - 1. Total Equipment Cost
 - 2. Engineering
 - a. Lump Sum
 - b. Hourly Rate
 - 3. Shop Labor
 - a. Lump Sum
 - b. Hourly Rate
 - 4. Field Labor
 - a. Lump Sum
 - b. Hourly Rate
 - 5. Training
 - 6. Manuals

7. Shipping
8. Taxes
9. Overhead
10. Profit
11. Total Installed Cost

5.03 MAJOR EQUIPMENT COMPONENT LIST

A. The following list describes the basis of design for the project base bid. Not all accessories and small items are listed.

Equipment Description	Manufacturer	Model	Qty	Notes
Audio New Amplifier, Network	QSC	CX-Q 2K4	1	Rack mounted
Audio Amplifier, 2CH, 430W @ 2 ohm	QSC	RMX850a	2	Rack mounted
QSC 2CH 430W @ 2 ohm Digital Signal & Control Processor	QSC	Core 110f	1	Rack mounted
RF Listening System Antenna	Listen	LA-116 CoAxial Dipole Remote Antenna	1	
RF Listening System for 500 seats (Future add Receiver as required): 20 devices, 5 neck loops minimum per 2010 ADA Requirements	Listen	LA-166 neck loop lanyard	5	
RF Listening System for 500 seats (Future add Receiver as required): 20 devices, 5 neck loops minimum per 2010 ADA Requirements	Listen	LR-400-072 Receiver	20	
RF Listening System Transmitter	Listen	LT-800-072-01 RF Transmitter	1	
Choir Microphone, electret condenser	Shure	cvo-B/C	6	With Wire aiming hanger, windscreen, 25 ft XLR cable attached. Requires +48V phantom power
Wireless Lavalier microphone	Shure	ULXD1/MX150	8	
Wireless handheld microphone	Shure	ULXD2/SM58	4	

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Equipment Description	Manufacturer	Model	Qty	Notes
Wireless Audio Receiver	Shure	ULXD4Q	2	With two (2) UA8 antennas
Active Antenna Amplifier	Shure	UA834WB	2	
Mixing Console - 32 mic/line + 2 stereo line, 16 outputs, Presents and Scenes with PC Mixing Console Application	Yamaha	TF5	1	Recording device (OFE)
PC Mixing Console Application	Yamaha	TF Editor	1	3 devices running TF Editor or StageMix can be connected at the same time
Handheld Microphone, Wired	Shure	SM58S	1	On/Off Switch Included
Audio Existing (E)				
Audio Amplifier, 4CH	Ashly Audio	PowerFlwx 4400	1	Rack mounted
Large 8 Ohm Loudspeaker (OFE)	SLS	US1590T-1	4	Surface Mounted
Medium 4 Ohm Loudspeaker (OFE)	SLS	US8190T	4	Surface Mounted
Small 4 Ohm Loudspeaker (OFE)	SLS	US2403	6	Surface Mounted
Microphone 16 patch panel (OFE)			1	Wall Box, Stage
Microphone patch panel (OFE)			1	Wall Box, Control Room
CD/Cassette Player	Denon	DNT-625	1	Rack mounted
Control New				
Control Panel, 8" POE Wall Mount	QSC	TSC-80W-G2-BK	1	
Control Panel, 8" POE Table Top	QSC	TSC-80TW-G2-BK	1	With Table Top Mounting accessory Included
IO TO RS232 CONTROLLER	Hall Research	HR-4P	1	
IO TO RELAY CONTROLLER	Winford Engineering	RLY204-12V-DIN	1	
Network Switch, 10 Port, 4x POE+	QSC	NS-1108P	1	Rack mounted
Surge Protector, Sequencer, 8 Outlet	SurgeX	SEQ-1U	1	Rack mounted
Basic Surge Protector, 9 Outlet	Middle Atlantic	PD-915R	1	Rack mounted
Hardware New				

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Equipment Description	Manufacturer	Model	Qty	Notes
Equipment Rack, Wall mount	Middle Atlantic	CWR-12-17PD	1	With Rackrail (CWR-RR12)
Rackshelf Utility	Middle Atlantic	U1	1	
Floorbox	FSR	FL-1550	1	4-Gang
Video New				
Projector, Laser, 12K Lumen, WUXGA (1920x1200), 3 LCD	Epson	Pro L1505UHNL	1	Use existing mount @Ceiling Soffit
Lens, Projector Middle Zoom	Epson	ELPLM11	1	
HDMI X4 Distribution Amplifier	Extron	DA4 HD 4K	1	With optional rack shelf
HDMI TX Decora	Extron	DTP T HWP 4K 231 D	2	
HDMI TX	Extron	DTP HDMI 4K 230 TX	2	with (QTY 1) optional rack shelf
HDMI AAP	Extron	70-616-02	1	
HDMI RX	Extron	DTP T HDMI 4K 230 RX	4	
HDMI 2X1 SWITCH	Extron	SW2 HD 4K	2	With Middle Alantic UTR1 rack shelf (Qty 2)
HDMI AUDIO DE-EMBEDDER	Extron	HAE 100 4K	1	With optional rack shelf
Video Reuse				
Projection Screen, ceiling recessed, electric	Draper		1	
HDMI Fiber TX/RX			1	Wall Rack

- B. The following list describes the basis of design for Alternate 1 – Add wireless microphones. Not all accessories and small items are listed.

Equipment Description	Manufacturer	Model	Qty	Notes
Audio Add				
Wireless Lavalier microphone	Shure	ULXD1/MX150	4	
Wireless Audio Receiver	Shure	ULXD4Q	1	
Passive Antenna Splitter Kit	Shure	UA221	1	Includes two (2) splitters

- C. The following list describes the basis of design for Alternate 2 – Add video distribution to displays. Not all accessories and small items are listed.

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Equipment Description	Manufacturer	Model	Qty	Notes
Video Add				
HDMI TX 2	Extron	DTP HDMI 4K 330 TX	2	
HDMI RX 2 Decora	Extron	DTP R HWP 4K 331 D	1	
HDMI RX 2	Extron	DTP HDMI 4K 330 RX	1	
Confidence Monitor, Consumer Grade	Insignia	NS-50D510NA19	1	

D. The following list describes the basis of design for Alternate 3 – Add handheld microphones.

Equipment Description	Manufacturer	Model	Qty	Notes
Audio Add				
Handheld Microphone, Wired	Shure	SM58S	2	On/Off Switch Included

E. The following list describes the basis of design for Alternate 4 – Add control system source selection (stage or control room desk).

Equipment Description	Manufacturer	Model	Qty	Notes
Control Add				
IO TO RS232 CONTROLLER Programming to add functionality to control panels.	Hall Research	HR-4P	1	

END OF SECTION 274116